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WORKING PLAN
OF
COIMBATORE NORTH DIVISION

(From 1956-57 to 1970-71)

1161

By
MAHMOOD HUSAIN
Madras Forest Service

Under the directions of the Chief Conservator of Forests, Madras

PARTS I AND II

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GOVERNMENT OF MADRAS
1967

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INTRODUCTION

The first Comprehensive Working Plan for Coimbatore North Division was prepared by Sri C. R. Ranganathan, M.A., I.F.S. A revised Working Plan for the division prepared by Sri V. S. Krishnaswamy, M.A., I.F.S., was in force up to 1955–56.

The present Working Plan deals with the area covered by the last Working Plan with some changes such as addition of ex-panchayat, etc., forests. Important among the new prescriptions are the proposals for rehabilitation of dry fuel forests, exploitation of sandalwood in the village sandal working circle and the raising of irrigated teak plantations.

The Working Plan Division was formed on [1st February 1954 and was closed on 1st March 1956.

The entire plan has been scrutinised by Sri V. S. Krishnaswamy, M.A., I.F.S., Conservator of Forests, Development Circle and the writer is much indebted for the able advice and guidance he has received from the Conservator of Forests in drafting the plan.

The writer takes this opportunity to express his thanks to the District Forest Officer, Coimbatore North Division and his staff for the wholehearted co-operation extended to him and his staff during the preparation of this Working Plan.

Coimbatore,
1st March 1956.

MAHMOOD HUSAIN,
Working Plan Officer.

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PART I

REVISED WORKING PLAN FOR THE COIMBATORE NORTH DIVISION

Summary of facts on which the proposals are based.

CHAPTER I—THE TRACT DEALT WITH.

SECTION I—NAME AND SITUATION.

1. This Working Plan deals with the whole of the Coimbatore North Forest Division and will be known as the Coimbatore North Working Plan.

2. With the exception of the Palamalai hills and the ryots' forests transferred back to the control of the department, the forests of the division form a continuous and compact block lying in the northern half of Coimbatore district and falling within Coimbatore *, Gobichettipalayam, Bhavani and Avanashi revenue taluks. The Palamalai hills are situated in Omalur taluk of Salem district and the former panchayat forests are in nine blocks in Erode, Avanashi and Gobichettipalayam taluks. The tract falls between the latitudes N 11° 7′ 0″ and 11° 48′ 2″ and the longitudes E 76° 41′ 30″ and 77° 49′ 45″.

*Thadagam Reserved Forest lies within Coimbatore taluk. A portion of the Reserved Forest is incluked in this division while the rest falls under Palghat division.

SECTION 2—CONFIGURATION OF THE GROUND.

3. The terrain shows great diversity in altitude and general configuration. The following classification will facilitate description :—

(*a*) The North Coimbatore plateau.
(*b*) The Palamalaii hills.
(*c*) The Nilgiri slopes.
(*d*) The Thadagam hills.
(*e*) The plains forests.

(*a*) *The North Coimbatore Plateau.*

4. This forms a southern extension of the general Mysore plateau and is the largest and most valuable block in the division. It is roughly 40 miles by 15 miles. The main body of the tableland lies at elevations ranging between 2,500 and 3,000 feet above sea-level. It is bordered on the south by a chain of high hills, rising steeply from the level of the plains (1,000 feet) to heights over 3,600 feet. This belt of high hills falls off eastwards and westwards and in the middle, flattens out to form the plateau areas of Onnaithittu, Dimbam and Kottadai. Though the Onnaithittu and Kottadai plateau (4,000 feet) adjoin each other, the former is curiously deficient in sandal, while the latter is one of the richest sandal tracts in the division. The hills culminate in a number of elevated peaks, of which the highest is the Kambatrayan Boli (5,664 feet). A few gaps occur in this ridge of hills and the Hassanur and Kadambur ghat roads as well as the Attiyur and Kakkarai footpaths, leading to the plateau pass through them. Towards the west, the country falls to the Gazalhatti pass in the basin of the Moyar affording a gentle and natural approach to the Talamalai plateau. The Sultan's road made by Tippu runs through this pass. But the route has long been abandoned, an old bridge across the Karibantrayan halla, still in a wonderful state of preservation and the avenue trees planted by Tippu are the only remaining signs of its past importance.

5. A series of double or trble hills ranges starting at right angles to the southern belt of hills and running south to north intersects the tableland at intervals into a number of broad valleys. The land in the valley is undulating generally (except in Talamalai

range where it is almost flat) and is nearly all abscorbed in encosures of cultivation. These hillocks often merge into the plateau in continuation of the southern highlands as in the case of the Mavahalla—Geddesal plateau (4,000 feet) which is an extension of the Kottadai plateau and contains Mavehalla, Devarnatham and other villages. The Gundri plateau (3,000 feet) is a similar extension towards the east.

6. The Mavahalla-Geddesal plateau rises to the Kotri Boli (5.22/ feet) and the Doddabetta (5,313 feet) near Geddesal and further north is thrown up into a mass of hills which are continuous with the Biligiri rans of Mysore. At the foot of these hill ranges lies the Minchiguli valley (4,000 feet). It is over 3,000 acres in extent, drained by two perennial streams, the Minchiguli and Sappai hallas and is of special interest for the richer flora it contains compared to the surrounding country.

7. *Drainage of the plateau.*—The general aspect of the plateau is northwards. It falls off gradually into the Palar basin towards the east and the Moyar towards the west. The Moyar is a perennial river falling into the Lower Bhavani Reservoir but it carries very little of the drainage of the plateau. (The Moyar water is specially valued by graziers as it is believed to be very beneficial to cattle and cattle penning is largely practised in the Moyar valley). The Palar flows northwards to join the Cauvery. During the hot weather the bed of the river dries up leaving only a few stagnant pools of water.

8. The outer slopes of the plateau are drained by numerous freshes which flow only during the rains and fall into the Bhavani river.

9. In spite of the high elevation to which the plateau often attains, there is a scarcity of perennial streams. A list of the more important streams on the North Coimbatore plateau is furnished in Appendix I. Broadly speaking , the eastern part of the plateau drains into the Palar, the central and most of the western part drains towards the north into Mysore. Only the south- western portion drains into the Moyar.

10. The drainage of the eastern part is carried off by numerous small streams which empty themselves into two big hallas caled the Jodumathi and Haelur halls. The Jodumathi halla is a tributary of the Halaru halla which is turn falls into the Palar. Neither of these two streams is perennial, but according to tradition, the Haleru halla was once a perennial stream.

11. The Kottadai-Mavahala plateau in the middle is drained by the tributaries of the Devar halla which ojins the Athipallam rising in the Onnaithittu plateau and traversing the Hassanur valley. The Minchingul halla, or Tattavadi halla carries the drainage of the Minchiguli valley. All these streams eventually empty themselves into the Swarnavati river which flows northwards into Mysore.

12. In the western portion, the Talamalai-Higgolur valley is drained by a number of monsoon streams, the chief of which are the Jagatti and Balapadugu hallas which unite to form the Halibidda halla flowing northwards into Mysore. The south-western portion of the plateau is drained by the tributaries of the Deppedorai and Karibantrayan hallas both of which fall into the Moyar.

(b) *The Palamalai hills.*

13. The Palamalai hills form an elongated plateau 12 miles by 4 miles running roughly north to south. They are a detached block lying between the Bargur plateau on the west and the Salem hills on the east and may be looked upon as an off shoot of the Eastern Ghats.

14. The Palamalai consist of a mass of high in the south, rising to 4,924 feet near Sidheswar Kovil, an eastern fringe of hills from 3,000 to 3,750 feet high and a lower ranges is terraced, as it were, into two tablelands and contains the Ramapatti and range of hills on the west. The plateau (2,400 to 3,200 feet) between these two outer Sothankadu enclosures. The country is generally rugged and broken but in the Ramanpatti enclosure towards the north, it is more gently undulating.

15. The aspect of the plateau is westwards and northwards. It is drained by the Ramanpatti pallam which traverses the length of the plateau, flowing north into the Cauvery near Mettur. This stream dries up during the hot weather. The outer slopes are drained by numerous torrents, the chief of which are the Periyapallam and the Chinnapallam.

(c) *The Nilgiri slopes.*

16. The Nilgiri slopes may be divided into a northern block and western block with reference to the town of Mettupalayam.

(1) The northern block comprises—
- (a) The Nilgiri Eastern Slopes Reserved Forest;
- (b) The Jaccanare Reserved Forest;
- (c) The Kallar Reserved Forest; and
- (d) The Odantorai Reserved Forest.

These reserves form here the outer face of the Nilgiris. The ground falls abruptly in all directions except the west from a maximum altitude of 4.760 feet to 1,500 feet and then vary gradually to the Moyar valley (900 feet) in the north and the Bhavani valley (800 feet) in the south and east. The Jaccanare and Kallar reserves lie on uniformly sloping ground and do not include any flat areas. The Odantorai block covers almost all the available flat area extending upto Mettupalayam town and the Bhavani river.

(2) The western block includes—
- (a) The Hulikal Drug Reserved Forest;
- (b) The Pillur Slopes Reserved Forest;
- (c) The Melur Slopes Reserved Forest; and
- (d) The Nellithorai block VII.

Of these, the Pillur slopes are the steepest the ground falling from 5,028 feet to 1,500 feet suddenly. Hulikal Drug and the Melur slopes are on lower hills (2,072 feet and 3,652 feet maximum respectively). The Manar river (with its feeder Shappaiguddaipallam), Kilparh stream, Niralaipalam, Chengalpallam and Kallamadripallam all tributaries of the Bhavani—drain this block. The northern block is drained by the Coonoor river, the Kallarpallam, Halur halla and Tattapallam, all flowing into the Bhavani, the Moyar and its feeder streams drain the northern portion of this block.

(d) *The Thadagam hills.*

17. The general directions off the hill ranges is south-west to north-east almost parallel to the Bhavani. The highest point in the northern part is Veluthamudi 3,046 feet above sea-level. In the southern part, the portion included in Mettupalayam range is the northern slopes of the range of hills culminating in the Nadugandi Boli (5,297 feet) and gradually falling to 2,000 feet elevation towards the east. A number of small hills occur in this portion and the slopes are generally gradual. The Kodemarapallam and the Thekkampattipallam drain the northern and the Periyapallam the southern parts.

(e) *The plains forests.*

18. These include isolated hillocks such as Nellimalai near Mettupalayam and Chennimalai, Arasalur, Voippadi, Villikaradu and Kongampalayam in Erode taluk and more or less level tracts such as Modur and Pethikuttai Reserved Forest and Odanthorai Reserved Forest near Mettupalayam and Velamundy Reserved Forest south of Bhavanisagar.

19. *The Bhavanisagar Dam.*—The Lower Bhavani Project was completed in 1952 damming the Bhavani below the confluence of the Moyar with it. The reservoir submerges portions of five reserves, viz :—

(1) The Nilgiri Eastern Slopes Reserved Forest.
(2) The Talamalai Reserved Forest.
(3) The Velamundy Reserved Forest. ✓
(4) The Modur and Pethikuttai Reserved Forest.
(5) The Odanthorai Reserved Forest.

After much consideration, it was decided that the submergible area should continue to be Reserved Forests. This will help to prevent cultivation by encroachment in accessible areas.

SECTION 3—GEOLOGY, ROCK AND SOIL.

20. The district has not been geologically surveyed.

21. The underlying rocks belong to the great gneissic series. The chief components of the rock are quartz horn-blende, felspar and garnet. Mica as such is rare. Foliation is seldom well-developed, the rock being to all appearances a common granite.

22. Remains of old gold diggings are to be found at Bensibutta near the Merur Sholaga Settlement in Sathyamangalam range. Out crops of limestone occur near Jeeragahalli and Talamai. Limestone quarries are found on the footpath from Yekkattur to Kadahatti.

23. The soil shows much variation with locality in colour, texture and depth. It is generally a shallow, reddish loam, derived from the felspathic and horn-blende gneiss. In the Yekkathur enclosure and generally in the Sathyamangalam plateau, the soil is thin and stony. In the valley from Geddessal to Bailur and around Hassanur, Chikkahalli and Talamalai. there are patches of block clayey soil which are swampy during the rains. The best soil is to be found in the Minchiguli valley, and in the Bhavani valley in Mettupalayam range.

SECTION 4—CLIMATE.

24. The plains at the foot of the plateau and of the Nilgiri hills are subject to a very hot and dry climate. Strong winds and dust storms are common in the hot months. During the months of November, December and January, the weather becomes pleasant but never cold. The plateau enjoys a mild equable climate favourable to vegetation and in particular to sandal. The daily range of temperature can, however, be high. Frosts are unknown. In the cold weather, and during the rains, the climate is delightfully cool and bracing.

25. *Winds.*—During the period of the south west monsoon (from June to September), the division is subject to strong gales blowing from a westerly direction, which when they do not bring rain, have a dessicating effect. The Onnaithittu plateau is especially exposed to these high winds.

In May, thunderstorms with occasional bursts of rain are common on the plateau.

26. There are eleven rain gauges in the division. The average monthly rainfall recorded at each station and the actual rainfall in detail are given in appendix III A and III B. In some case figures from 1910 are available. The figures for Mettur were obtained from the Electricity Department.

27. It will be seen from the rainfall statistics, that the entire division gets the benefit of both the monsoons. The bulk of the rains is derived from the north-east and falls during September, October and November. The average rainfall of the division is about 30 inches and of this nearly half is from the north-east monsoon.

28. The rainfall is adequate for the free growth of sandal on the plateau but is too meagre to support high forest of good quality. The driest months in the year are January, February and March, followed by occasional sharp showers in April and May. The rainfall is normally well distributed over the year, there being no rainless month. When on occasion, no rainfalls during the interval between the two monsoons, the streams and wells dry up especially on the plateau and acute drought prevails. In common with the rest of South India, this region has suffered from failure of rain for a number of years before 1953. The almost annual burning of the forests has probably contributed to the further diminution of soil moisture.

29. The regions at the foot of the Nilgiris such as Kallar, the Bhavani gorge and Gopanari are malarial from February to June. Conditions on the plateau are much better than before and the local name for malaria—Hassanur fever—is only of historical interest. Plague breaks out often in Talamalai range. Water-supply is often unwholesome on the plateau and guinea worm attacks are common enough around Yekkathur, Kanakundur and other places. Lately, two health centres under the auspices of the Kasturba Gandhi National Memorial Fund have been opened at Germalem and Kottadai.

SECTION 5—WATER-SUPPLY.

30. The Bhavani, the Kallar, the Coonoor river, the Moyar and for a short distance the Cauvery run through the division, and in the vicinity of these perennial rivers, the water-supply is good and ample.

31. The plains of Mettupalayam range are well served with a number of perennial streams rising in the Nilgiris. A network of channels carrying water from them for agricultural purposes has been constructed by private enterprise.

32. The water-supply on the plateau is unsatisfactory. The usual sources of supply to the villages in the enclosures are streams and wells in the bed or in the vicinity of streams. Water from tanks is rarely used.

33. The water table on the plateau is as a rule low and there are indications that it has been steadily sinking in recent years. The sources of supply are unprotected and the water is in consequence generally unwholesome. During the dry season, the supply is inadequate and at times of drought fails altogether in many places.

34. The water-supply of forest rest-houses and subordinate quarters is equally unsatisfactory. Appendix IV gives the details with the exception of the Jeeragahalli and Kadambur wells, departmental wells either do not exist or are not used on the plateau. At Geddesal, water-supply is a constant problem to touring officers. The departmental well is dry and there is apparently no hope of striking water by deepening it. Water has to come from the Aiyanagiri stream, over a mile away from the bungalow.

35. Generally, speaking, the supply is more reliable and the water more wholesome in Talamalai range than in Sathyamangalam range.

36. Numerous tanks, small and large exist on the plateau and the watering of cattle is not a serious problem here. A list of wells and tanks in grazing grounds is given in Appendix IV. These are borne on the books of the division and maintenance work is done when necessary.

SECTION 6—DISTRIBUTION AND AREA.

37. The total area of division is 554,480 acres (866.37 square miles). The headquarters of the division is at Coimbatore. The division consists of four ranges as shown below :—

Serial number.	*Name of Range.*	*Headquarters.*	*Area in acres.*	*Number of beats.*
1	Sathyamangalam ..	Sathyamangalam ..	204,225·64	20
2	Talamalai	Do. ..	147,173·14	13
3	Bhavani	Andhiyur	90,967·47	11
4	Mettupalayam	Mettupalayam ..	112,113·50	13
		Total ..	554,479·75	57

38. A detailed statement of reserves is given in Appendix VI and the beats and sections in each range in Appendix VII.

39. *Classification of reserves.*—All the reserves are placed in Class I (reserves to be permanently under the control of the Forest Department), with the exception of the following nine blocks :—

(1) Chennimalai Reserved Forest—Sathyamangalam Range.
(2) Villikaradu Reserved Forest—Sathyamangalam Range.
(3) Arasalur Reserved Forest—Sathyamangalam Range.
(4) Kongarapalayam Reserved Forest—Sathyamangalam Range.
(5) Voippadi Reserved Forest—Sathyamangalam Range.
(6) Odanthorai Reserved Forest—Mettupalayam Range.
(7) Nellimalai Reserved Forest—Mettupalayam Range.
(8) Mothur and Pethikuttai Reserved Forest—Mettupalayam Range.
(9) Velamundy Reserved Forest—Talamalai Range.

40. A list of admitted enclosures of cultivation in the reserves of the division is given in Appendix VIII.

SECTION 7—STATE OF THE BOUNDARIES.

41. The reserves and enclosures are defined by cleared boundary lines, 12 to 18 feet wide. Along finally demarcated boundaries, at angles and intermediate points, stone cairns are generally set up surmounted by stone slabs bearing serial numbers, arrow marks and the letters 'R.F.' written in coaltar. Small stones have been kept in lines in between cairns in many reserves.

42. Owing to the great length of boundary lines and the inadequacy of staff, boundaries are not kept regularly and proporly cleared.

43. The frontier between Mysore and Coimbatore adjoins the Guthialathur and Talamalai reserves. The Swarnavathi and its feeder stream, the Chikkayankiri halla and the Sigatti halla, a tributary of the Moyar demarcate the forest boundary along the major part of the frontier. The rest of the frontier is a cleared line twenty feet wide (10 feet on each side) demarcated, with cairns and is divided into the three following sections, one of which is verified by the District Forest Officer, annually in rotation.

Section 1.—From the trijunction of Mysore, Kollegal taluk and Gobichettipalayam taluk to Karaipalayam—Distance 3 miles 4¾ furlongs.

Section 2.—From Karaipalayam to Kumbaragundi hella—Distance 9 miles 1-1/2 furlongs.

Section 3.—From Yethikatti Basaweswarangudi southwards to Sigatti halla—Distance 2 miles 5 furlongs.

44. The entire line is maintained as a fireline and is burnt annually. The expenditure on the work is incurred by the Madras Government in the first instance and half the cost is recovered from the Mysore Government later.

SECTION 8—LEGAL POSITION.

45. The reserved forests of this division are the absolute property of the State subject to certain specified rights and concessions.

46. *Unreserves and patta lands.*—Though the unreserves and patta lands in villages enclosed in or adjoining reserved forests are not under the administrative charges of the District Forest Officer, yet the extraction of sandal trees from such lands is carried out by the Forest Department.

47. *Unreserve sandal.*—Sandal trees occurring in unreserves are the property of the State. The Revenue Divisional Officer is entrusted with the protection of the unreserves and excercises the functions of a District Forest Officer under the Madras Forest Act. The unsatisfactory nature of the protection afforded to the sandal stock and the wide prevalence of sivoijama cultivation have been referred to in the first working plan. The extent of unoccupied land has dwindled considerably during the last twenty years. Especially, during the last five years, quite a large number of plainsmen displaced from the villages submerged by the Bhavanisagar have migrated the hills and have become sivoijama cultivators. Inevitably the conservation of sandal has been adversely affected (measures to ensure better conservation are considered in Part II).

48. *Patta sandal.*—The history of the changes of policy in regard to the title of Government to sandal trees growing on patta lands has been studied in detail in the first working plan. The present position may by briefly summarized as follows :—

Patta lands fall into three categories :

(1) Lands assigned on prior to the B.P. No. 14, Forest, dated 19th January 1907. On such lands, Government have no clear title to sandal trees.

(2) Lands assigned in hill villages since the issue of the B.P. No. 14, dated 19th January 1907 up to the date of G.O. No. 1290, Revenue, dated 16th June 1928. On such lands (according to the opinion of the Advocate-General), the trees existing at the time of assignment are the property of Government even if the terms of the Board's Proceedings have not been carried out in any or all particulars. But trees which have come in since the assignment must be held to be the property of the pattadar.

(3) Lands assigned after the issue of G.O. No. 1290, Revenue, dated 16th June 1928. On such lands, all existing and possible future growth of sandal trees are the property of Government. This is a close approximation by executive action to declaring sandal a ' royal ' tree.

SECTION 9—RIGHTS AND CONCESSIONS.

49. The various rights and concessions, communal and public, recognised at the time of settlement are contained in the *Fort St. George Gazette* notifications relating to each reserve. References to number and date of the notifications and the pages in the gazette are given in the table of reserved forests (*vide* Appendix VI).

CHAPTER II—THE FOREST.

SECTION 1—COMPOSITION AND CONDITION OF THE CROP.

50. *General description.*—The forests of the division as a whole are composed of mixed deciduous species of poor girth and height growth. In a few favoured and naturally protected localities, the forest attains the densiy and dimensions of high forest. But the bulk of the crop is an associate formation receiving constant setbacks chiefly through fire and to a less degree through theft and overgrazing. The economic importance of the forest consists chiefly in the plentiful occurrence of sandal in the plateau.

51. *Classification into Champion's forest types.*—The following are the chief recognizable forest types :—

(I) Southern tropical dry deciduous type.

(II) Southern tropical thorn forest type.

(III) Southern tropical semi-evergreen forest type.

(IV) Southern wet temperate forest type.

A decription of each of these types is as follows :

52. I. *Southern tropical dry deciduous type.*—In extent as well as importance, the dry tropical type predominates in the division. Within this broad classification different sub-types are met with, due to altitude, depth of soil and other factors of which fire is of primary importance. The altitude covered is between 2,000′ and 5,000′. Both the top and lower canopy are deciduous. Grass is present, but only with repeated fire is it encouraged to lead on to the savannah type. It merges into thorn forest wherever rainfall drops below 25 inches.

53. The four important specific types met with are well marked—

I. (*a*) *The Anogessues type.*—It occurs extensively at elevations between 2,500 and 3,500′ on flat and undulating country with shallow soil and in the lower slopes of hills and the plateau. Rainfall is generally between 35″ and 45″.

Areas suitable for sandal, but affected by constant fires bear this specific type. In other words, ecologically it is prior to the sandal type. The slopes traversed by the Hassanur-Kottadi footpath exemplify the manner in which sandal areas are progressively turned into Anogeissus forests. On fire swept slopes, the sandal is completely killed out and Anogeissus springs up gregariously unless the fires are too intense to allow any tree growth to survive. The strip of forest along the Hassanur-Chamrajnagar road which is reported to have once contained sandal has in many parts been degraded to the Anogeissus type through repeated fires. The growth here is however of a better type than usual, and contains a proportion of teak, *Pterocarpus marsupium* and rosewood. Likewise in the Moyar valley, the sandal forest has generally given place to the Anogeissus type.

In Talamalai Range it occurs chiefly on the low range of hills which divide the Talamalai-Higgalur plain from the cultivated areas of Tignari, Kalbandipuram, etc. It is to be seen also to the north of the *Shorea talura and* around Onnaithittu in the region of the old Gerhatti and Vanavasi doddies.

In composition this type varies somewhat in different places. While generally (and in particular in Talamalai range and the western parts of Satyamangalam range) *Anogeissus latifolia* is the commonest tree, it becomes less frequent around Yekkathur enclosure and east of it. *Chloroxylon swietenia* almost taking its place as the type tree Further east, near Makkampalayam a fair proportion of *Hardwickia binata* is met with. Similar differences in undergrowth are also observed. *Gymnosporia montana* and *Dodonaea viscosa* which are common species in Talamalai range are rare in Satyamangalam range.

Where this type of forest is found to adjoin villages, grazing is heavy all the year round.

The density of the crop is on an average 0.4 to 0.5. There is no humus layer on the soil. Trees over 4′ in girth are rare. The growth is adequate for the supply of agricultural implements to the neighbouring villages but is otherwise economically unimportant as there is no demand for fuel in the plateau. The stems are misshapen and stunted. Mature trees are scarce.

The following species occur in the crop :—

(1) *Anogeissues latifolia.*

(2) *Terminalia chebula.*

(3) *Zizyphus xylopyrus.*

(4) *Acacia leucopholea.*
(5) *Canthium didymum.*
(6) *Chlorozyin swietenia.*
(7) *Pterocarpus marsupium.*
(8) *Albizzia odoratissima.*
(9) *Erythroxylin monogynum.*
(10) *Premna tomentosa.*
(11) *Dolichandrone falcata.*
(12) *Randia dumetorum.*
(13) *Diospyros moulena.*
(14) *Elaeodendron glaucum.*
(15) *Buchanania latifolia.*
(16) *Bridelia retusa*
(17) *Albizzia amara.*
(18) *Bassia latifolia*
(19) *Kydia calycina.*
(20) *Gardenia gummifera.*
(21) *Eriolaena quinquelocularis.*
(22) *Greuria tilaefolia.*
(23) *Soymida febrifuja.*
(24) *Dalbergia sissoides.*
(25) *Albizzia lebbek.*
(26) *Diospnyrus melamoxylon.*
(27) *Cochlospermum gossypium.*
(28) *Givottia rottleriformis.*
(29) *Terminalia belerica*
(30) *Pongamia glabra.*
(31) *Vitex altissima.*
(32) *Terminalia tomentosa.*
(33) *Wrightia tinctoria.*
(34) *Cassia fistula.*
(35) *Semecarpus anacardium.*
(36) *Schleichera trijiga.*
(37) *Schrebera swietenioides.*
(38) *Dendroclamus strictus.*
(39) *Bambusa arundinacea.*
(40) *Acacia Catechu.*

54. *Undergrowth.*—The undergrowth consists of *Dodonea viscosa*, *Grewia hirsuta*, *Helicteris isora*, *Fluggea lucophyrus*, *Flacourtia sp*, *Jassminum angustifolium*, *Zizyphus olnoplia*, *Pterolobium indicum*, *Phoenix acaulis*, *Ureena lobaia*, *Cassia auriculata*, *Gymnosporia montana* and grass.

Dodonea viscosa occurs over great stretches of country in Talamalai Range, on poor unproductive soils.

55. I (*b*) *Sandal type.*—Sandal occurs in the seral stage next to the Anogeissus type and prior to the semi evergreen condition, and also in the thorn forests (scrub jungle) belonging to the southern thorn forest sub-type of Champion.

56. In North Coimbatore, sandal occurs chiefly on the flat or undulating plateau at elevations between 2,500 and 3,200 feet. It is also found on the Geddessal-Mavahalla-Kotadai plateau at 4,000 feet elevation, as well as at much lower altitudes, for example, in the Moyar valley and the submontane forests at the foot of the plateau and the Nilgiri Eastern slopes. In these latter localities, it has spread from the plateau recently, the trees being usually under 15 inches in girth and sparsely distributed. But its main habitat where the optimum conditions for its growth and spread are found is the Talamalai—Higgalur plain, the Hassanur valley, the Yekkathur and Gundri plateau and the Palamalai plateau with elevations varying from 2,500 to 3,200 feet.

The species occurs in a fringe round villages and clearings and tends to become more and more scarce as we go further from the enclosures. It grows in patches of varying density and size.

It is found growing freely an almost every type of soil, on stony red soil around Yekkathur in the Barabetta reserve, Geddessal, on the slips of black clayey soil near Hassanur and near Badagali Kerai in Talamalai range and on arid soils in the Talamalai reserve.

It shows smilar tolerance towards differences in rainfall.

The main factors which operate as effective checks to the free spread of sandal are grazing and repeated fires. To a certain extent, the heavy incidence of grazing in sandal areas minimizes the fire danger and of two evils, grazing seems to be the lesser, as it gives a chance of survival to seedlings protected by thorny bushes.

The retreat of the sandal forest as a result of the ravages of fire is a matter for serious concern. In the Moyar valley for example, many areas that contained sandal according to the 1932 stock maps have no sandal at all now, and fires have taken a heavy toll. But, once sandal get a chance to spread in a locality naturally protected from fire and excessive grazing, the species spreads rapidly. Some worked coupes of Kongarpalayam fuel series furnish a very strikink example of this. A non-sandal area before, this now supports a dense crop of sandal over about ten acres raised by broadcasting sandal seed some twenty years ago and the extent is spreading noticeably.

The fact that sandal does not spread to steep slopes and is confined to flat or undulating country indicates that fire is the governing factor in the distribution of the species. When the slopes are protected from fire either by natural or artificial means sandal tends to come in.

The gregarious occurrence of Anogeissues latifolia is almost always a indication that the area is subject to frequent fires. The species appears to be able to withstand fire damage by exfoliating its bark in patches and it is probable that its regeneration is assisted by fires. On such Anogeissus areas the absence of sandal is most marked. Phoenix acaulis (wild date) is another indicator of areas swept by intense fires which allow hardly any tree growth to persist. Near Kotadai there are extensive wastes of almost pure Phoenix acaulis.

The factors of the locality such as soil, rainfall, etc. appear to be only of secondary importance in the occurrence and distribution of sandal, except in so far as they determine the nature and health of the host trees and the types of forest formation. In moist fertile localities or in regions of heavy rainfall, such as the Minchiguli valley or the sholas, where the crop is of the high forest type, sandal is either completely absent or, if it is introduced artificially, shows little tendency to spread.

The nature of the general crop appears to be an important factor in the distribution of sandal. It is a tree of deciduous associate formations especially of the bush type, and it may be that it is a transitory species tending to vanish with the progressive improvement of a crop in density and height growth. It is among the earliest species to arise in abandoned clearings after bush formation has taken place. The bushes which are usually thorny protect the young sandal from exposure and from cattle and wild animals.

One of the probable causes for the occurrence of sandal in the neighbourhood of villages is the fact that birds are more numerous around cultivation than in the interior of the forest.

57. *Associated species.*—The following species occur in the sandal zone :—

(1) *Canthium didymum.*
(2) *Chloroxylon swietenia.*
(3) *Erythroxylon monogynum.*
(4) *Premna tomentosa.*
(5) *Zzyphus xylopyrus.*
(6) *Acacia leucophloea.*
(7) *Atalantia monophylla.*
(8) *Strychnos potatorum.*
(9) *Ixora parviflora.*
(10) *Pterocarpus marsupium.*
(11) *Bridelia retusa.*
(12) *Pongamia glabra.*
(13) *Grewia species.*
(14) *Albizzia odoratissima.*
(15) *Anogeissus latifolia.*
(16) *Terminalia chebula.*
(17) *Polyathia cerasoides.*
(18) *Linociera malabarica.*
(19) *Feronia elephantum.*
(20) *Randia dumetorum.*
(21) *Limonia acidissima.*
(22) *Buchanania latifolia.*
(23) *Acacia ferruginea.*
(24) *Acacia catechu.*
(25) *Albizzia amara*
(26) *Dalbergia paniculata.*
(27) *Bambusa arundinacea.*
(28) *Diospyros montana.*
(29) *Vitex altissima.*
(30) *Holoptelea integrifolia.*
(31) *Soymida febrifuga.*
(32) *Lagerstraemia parviflora.*
(33) *Albizzia lebbek.*
(34) *Eleedendron glaucum.*
(35) *Diospyros melanoxylon.*
(36) *Gmelina arborea.*
(37) *Pittosporum floribundum.*
(38) *Olea dioica.*
(39) *Ligustrum species.*
(40) *Wendlandia notoniana.*
(41) *Mimusops hexandra.*
(42) *Gardenia gummifera.*
(43) *Zizyphus jujuba.*

The undergrowth consists of :—

(1) *Toddalia aculeata.*
(2) *Webera corymbosa.*
(3) *Opuntia dillenii.*
(4) *Pterolobium indicum.*
(5) *Lantana camara.*
(6) *Gymnosporia montana.*
(7) *Grewia hirsuta.*
(8) *Fluggea leucophyrus.*
(9) *Flacourtia species.*
(10) *Acalypha fruticosa.*
(11) *Argyreia species.*
(12) *Dodonaea viscosa.*
(13) *Indigofera pulchella.*
(14) *Carissa species.*
(15) *Capparis species.*
(16) *Memecylon edule.*
(17) *Cipadessa fruticosa.*
(18) *Jatropha curcas.*
(19) *Cassia species.*
(20) *Barleria buxifolia.*
(21) *Euphorbia tirucalli.*
(22) *Sarcostemma brevistigms.*
(23) *Secamone ametica.*
(24) *Hiptage madablota.*
(25) *Scutia Indica.*

The natural regeneration is generally adequate.

It is believed that the germination of sandal seeds takes place most freely in freshly turned loam. The presence of humus or other manure appears to act adversely on germinating seeds. As an example of this, the most prolific regeneration is often seen under mother trees in ploughed lands, while on humus soils under sholas and semi sholas, the percentage of germination is very low.

In the forest, sandal seedlings are observed almost exclusively in the shelter of thorny bushes. Seedlings do not come up in the open or, if they do, they are browsed down by cattle.

Sandal trees standing in the open or on patta lands generally bear a heavier seed crop than do trees in the reserve. This is probably due to the freer crown development of patta sandal trees and to the increased photosynthetic activity of foliage fully exposed to the sun. The seeds ripen earlier in the former case.

58. I (*c*) *Shorea talura* type (Dry tropcal ceral forest type).—*Shorea talura* is associated with the savannah type of forest which is of secondary origin—due to the retrogression in the climatic type brought about by repeated fires. The grass becomes conspicuous wherever the canopy is broken and thanks to burning thrives over other forms of vegetation.

Shorea talura occurs in gregarious patches of varying but small size over an area of 3,000 acres on this hill slopes around Onnaithittu, the southern boundary slopes of Surabar betta, the easterly slopes towards the Odurkuttai halla and the slopes rising from the Alambra and Dasari hallas. The species is practically exclusively confined to Talamalai range. A few trees are to be found at the top of Araikan betta north of Hassanur in Satyamangalam range and near Karimathanboli and the tree occurs on steep slopes at elevations between 3,000 feet and 4,000 feet, generally above 3,500 feet in localities which are heavily and frequently fired. Fire destroys many standing stumps due to the trees being resinous but at the same time creates an ideal bed for profuse regeneration.

Several of the shorea patches are pure dense stands, notably the patch on the Surabar betta and the one near Mavantham. Elsewhere it forms about a third of the tree crop and is associated with *Pterocarpus marsupium*, *T. Chebula*, *A. latifolia A. Odoratissima*, *Buchanamia latifolia* and an occassional teak.

The undergrowth consists of *Phoenix acantis*, grass and *O. hissuta*, Shorea regeneration is good.

All girth classes are well represented upto a girth of 5 feet.

The species is badly attacked by a Longicorn borer and no Shorea patch appears to be free from this borer. In every patch a proportion of trees killed by borers is to be found and the dead resinous stems get burnt annually by the fires which sweep the area.

59. I (*d*) *Teak type* (*Dry mixed deciduous forest with teak*).—This type is found in moist localities. Soil is physiologically moister. On the plateau, it occurs on ridges and on the gentler hill slopes of and over 3,500 feet. It occurs at a lower elevation (3,000 feet) near Tattavadi and Karaipalayam in Satyamangalam Range. It is not plentiful enough to be commercially very significant. A sprinkling of it is found near Hulikerai west of Hasanur and on the hills around Onnaithittu and the trees are misshapen and hollow. The quality of trees found on the Tethni betta near Talakarai is better.

It is found in areas practically fire burnt every year, associated with fire-hardly species like *Buchanania latifolia*. *Semecarpus anacardium*, *Terminalia chebula*, *Phyllanthus emblica*, *Bridelia retusa*, *Shorea talura*, *Pterocarpus marsupium* and *Gmelinaspp.*

60. II. *Southern Tropical thorn forest type*.—The type generally corresponds to Ranganathan's "Submontane" forests occupying the 'bonnys' of plain land intruding into the hill ranges locally known as 'combais', the foot hills and the margins of the plains. This type has resulted invariably due to biotic set backs on already edaphically poor areas.

These forests extend in a narrow strip along the foot hills of the plateau and in the combais of the Moyar basin on the west to the Palamalais on the east. Altitude varies from 800 feet to 1,200 feet.

The forests adjoining cultivation on the plains and close to towns of Satyamangalam, Andhiyur, Bhavani, Mettupalayam and Gobichettipalayam, are worked under the fuel working circle. Grazing is intense though there is only a thin grass growth which may appear fairly complete during the short moist season, but of the soil is more or less bare. Due to the tread of cattle the surface is hard and caked creating inimical conditions for regeneration. The soil is shallow, often stony and of very poor quality.

The forest is degraded, almost xerophytic, open scrub of low density with trees usually having short boles and low branching crowns. The lower canopy is absent or ill defined.

The chief species found are :—

(1) *Albizzia Amara.*
(2) *Acacia latronum.*
(3) *Acacia leucophloea.*
(4) *Gyrocarpus jacquinii.*
(5) *Balsamadendron borryi.*
(6) *Dichrostachys cinerea.*
(7) *Zizyphus trinervia.*
(8) *Atlantia monophylla.*
(9) *Cordia monoica.*
(10) *Zizyphus xylopyrus.*

(11) *Zizyphus jujuba.* ✓
(12) *Melia azadirachta.*
(13) *Sapindus emarginatus.* ✓
(14) *Chloxoylon swietenia.* ✓
(15) *Pterocarpus marsupium.*
(16) *Acacia Catechu.*
(17) *Erythroxylon monogynum.* ✓
(18) *Protium coudatum.* ✓
(19) *Morinda tinctoria.* ✓ ✓
(20) *Hardwickia binata.*
(21) *Strychnes nux-vomica.*
(22) *Mangifera indica.*
(23) *Tamarindus indica.*
(24) *Terminalia arjuna.*
(25) *Eugenia jambolama.* ✓
(26) *Dalbergia paniculta.*
(27) *Elaeodendron glancum.*
(28) *Vitex altissima.* ✓
(29) *Grevia asiatica.* ✓
(30) *Premna tomentosa.* ✓
(31) *Ailanthus malabaricum.*
✓ (32) *Santalum album* (very limited quantity).

Chloroxylon swietenia is a species sought after and subjected to heavy illicit fellings.

Tamarind is a fairly common tree everywhere in this type but in Bhavani Range, especially in Periacombai, and near Ulliyur in Mettupalayam Range it is often almost gregarious, large numbers of trees being found over compact areas.

Undergrowth : Is very light. Species besides grasses are generally thorny and not sufficient to protect the soil.

The species are :—

(1) *Opuntia dillenii.*
(2) *Randia dumetorum.*
(3) *Z. Oenoplia.*
(4) *Capparis species.* stylosa,
(5) *Solanum pubescens.*
(6) *Acacia intsia.*
(7) *Pterolobium indicum.* ✓
(8) *Grewia hirsuta.* ✓
(9) *Lantana camara.* ✓
(10) *Toddalia aculeata.* asiatica
(11) *Dodonea viscosa.* ✓
(12) *Cassia auriculata.* ✓
(13) *Fluggea leucopyrus.* ✓

61. III. *Southern Tropical semi-evergreen forest type.*—This is seen either in areas like Minchiguli valley where it has been brought about by biotic retrogression of the shola (due to shifting cultivation) or along the stream beds in areas which bear a deciduous crop. In the later case, the trees and are still stunted and consist of *Mangifera indica, Terminalia arjuna, vitex altissima, Elaeodendron glaucum, Eugenia jambolana*

etc. Further in some of the higher slopes, which are not run over by the yearly fires, as the slopes facing the valley of the Peria pallam near Kavalur and in the top near Malliammadurgam, the vegetation is dense and tends to be semi-evergreen in nature.

In the Minchiguli valley and parts of the area between the Tattavadi halla and the Mysore frontier in the Guthiyalathur reserve, the rainfall is above 50″. The soil is a deep loam From the climatic factors, it is evident that the crop-left to itself will in course of time change to evergreen conditions.

The crop consists of :—

(1) *Terminalia tomentosa.* കരിമരുത്
(2) *Dalbergia latifolia.* ഈട്ടി
(3) *Pterocarpus marsupium.* വേങ്ങ
(4) *Gardenia latifolia*
(5) *Phyllanthus emblica.* നെല്ലി
(6) *Kydia calycina.*
(7) *Albizzia odoratissima.* [illegible]
(8) *Streospermum chelonoides.* [illegible]
(9) *Terminalia bellerica.* താന്നി
(10) *Terminalia chebula.* കടുക്ക
(11) *Bridelia retusa.*
(12) *Acacia latifolia.*
(13) *Machilus macrantha.*
(14) *Cinnamomum zeylanicum.*
(15) *Eugenia jambolana.* ഞാവൽ
(16) *Atlantia monophylla.* [illegible]
(17) *Mallotus phillippinensis.* [illegible]
(18) *Mangifera indica.* [illegible]
(19) *Cedrela toona.* [illegible]
(20) *Bischofia Javanica.* [illegible]
(21) *Michelia champaca.* ചെമ്പകം
(22) *Ixora parviflora.*
(23) *Strychnos potatorum.* തേറ്റ
(24) *Bombax malabaricum.* ഇലവ്
(25) *Careya arborea.* കുമ്പിൾ

The undergrowth is for the most part of rank growth of sword grass often 15 feet high which chokes all other young vegetation. Under dense groups of trees, the floor is clear of weeds and is covered with a wholesome layer of humus. *Solanum giganteum, Grewia hirsuta, Strobilanthes, Toddalia aculeata, Rubus lasiocarpus, Clerodendron infortunatum, Hiptage madablota* are found in places where tree groth is not too dense. Bracken comes up gregariously after a fire, but the tall grass soon overtakes and swamps it.

Dalbergia latifolia, Pterocarpus marsupium, Terminalia tomentosa and *Cedrella toons* are the only valuable species available in semi-evergeen areas.

Natural regeneration of *Dalbergia latifolia* is good.

Bamboos are generally found in semi-evergreen forests, but are conspicuously absent in the Minchigulli valley where the conditions are ideal for them.

The main bamboo species of the division is *Dendrocalamus strictus* but a proportion of *Bambusa arundinacea* is also found in moist localities, more especially as a narrow fringe along streams and in swampy ground.

Bamboos are found in practically all other types also.

62. *Southern wet temperate forest—Hill shola forests.*—Sholas are stunted evergreen patches of forests found in the more sheltered sites on rolling grass land. The crowns are usually very dense and rounded with entire coriaceous leaves which tend to be red to a varying degree when young, giving a range of colours which is one of the most conspicuous features of the type. The branches are clothed with mosses, ferns and other epiphytes and woody climbers are common. There is no marked differentiation of canopy layers but a continuous series from under shrubs and shrubs to large trees. There is a considerable admixture of species, pure crops of even moderate extent being absent.

The shola type is met with almost exclusively in the Satyamangalam Range, especially on the slopes of the Biligirirangans—Patches of shola forest of an aggregate area of about 60 acres occur on the Kuguva betta and the ridge continuing therefrom and on the slopes of the Aiyangiri and Kanisiri bettes around the Minchiguli valley. The largest patch is the one on the Kuguva betta with an extent of 400 acres.

The sholas are deficient in saleable species.

The grass land surrounding the sholas is burnt almost annually.

The species comprising the sholas are :—

(1) *Eugenia janbolana.*
(2) *Machilus macarantha.*
(3) *Cinnamommum Zeylanicum.*
(4) *Pittosporum floribundrum.*
(5) *Mallotus phillippinensis.*
(6) *Bischofia javanica*
(7) *Cedrela toona.*
(8) *Mangifera indica.*
(9) *Atalantia monophylla.*
(10) *Liustrum walkeri*
(11) *Olea diocia.*
(12) *Celtis tetrandra.*
(13) *Albizzia marginata.*
(14) *Meliosma arnottiana.*
(15) *Meliosma wightii.*
(16) *Heynea trijuga.*
(17) *Salix ichnostachya.*
(18) *Canthium didymum.*
(19) *Wendlandia notoniana.*
(20) *Acrocarpus fraxinifolius.*
(21) *Elaeocarpus tuberculatus.*
(22) *Erythrina indica.*

The under growth consists of :—

(1) *Strobilanthes.*
(2) *Toddalia aculeata.*
(3) *Cocculus laurifolius.*
(4) *Solanum giganteum.*
(5) *Pavetta indica.*
(6) *Callicarpa lanata*
(7) *Clerodendron infortunatum.*

(8) *Miesa perottettiana.*
(9) *Citrus aurantium.*
(10) *Rubus lasiocarpus.*
(11) *Allophylus cobbe.*
(12) *Acacia concinna.*
(13) *Braken.*
(14) *Grass.*

Four small patches of stunted shola occur on the Urugumalai slopes near the Kadambur–Malliamma Durgam foot-path. The slopes of the Yeggariboli near Gundri carry a few small patches at the head of streamlets.

In the Talamalai Range small patches of a total area of 300 acres are found in the neighbourhood of Onnaithittu. The growth is inferior to that in Satyamangalam sholas and should perhaps strictly be ranked as semi-evergreen. The main species are *Eugenia, Pittosporum, Mangifera, Ligustrum* and *Wendlandia* with an abundance of woody climbers. The patches occur near the old cultivation of Bairandu and along streamlets, the chief one being on the Gummagiri Betta slopes to the south-east of Putrai, occupying 50 acres.

SECTION 2.—INJURIES TO WHICH THE CROP IS LIABLE.

63. The main cause of injuries to the forest are dealt with below :—

Natural causes—(*a*) *Winds.*—The whole region is comparatively windless. Some of the ridges are however exposed to strong winds and many wattle trees planted in the Geddessal sholas have been uprooted in recent years.

(*b*) *Drought.*—The direct harm from the general drought conditions prevailing in the area for a number of years can hardly be isolated from the effects of other factors. It is possible the stag-headedness of sandal and its deciduous character in this divisions are traceable to drought.

64. *Human agency.*—Next only to the devastation due to the spike disease in the extent of harm done, come the many types of damage through human agency.

(*a*) *Fires.*—It many be safely stated that almost all the steeper slopes and a good proportion of the flat country are burnt regularly once in two years. Fires are caused wilfully or accidently. The common causes of fire are—

(1) The burning of grass along paths frequented by Sholagas.

(2) Burning to facilitate the collection of minor produce such as gallnuts/and deer horns.

(3) Burning the grass for the collection of yams (Dioscorea) which the Sholagas eat.

(4) Burning for the sake of the tender grass which comes up after a fire. Cattle do not eat mature sword grass, but they will eat the tender shoots coming up after a burn.

(5) Fires lit by cartmen for cooking along cart-tracks or roads.

(6) Burning of grass by Sholagas to facilitate shooting for the benefit of shikaris.

Fires cause some damage to sandal trees and sandal regeneration. The gradual disappearance of sandal from many forests is due to fire and fire alone.

(*b*) *Theft.*—Petty pilfering of head-loads of firewood is rife all along the foothill forests. So is the removal of small timber for agricultural implements around the hill villages. Very recently, two cases of theft of sandalwood in the easily accessible forests of Mettupalayam Range and one of theft of sandalwood in the interior of the Range came to light. From all accounts, theft of sandlwood is rare even in this Range and unknown in the other Ranges.

(c) *Bark stripping on sandal trees.*—The chewing of tender bark of sandal trees is common in some hill areas and the writer came across this type of damage near the Puchimarathur and Nellimarathur settlements near the upper reaches of the Bhavani, in Mettupalayam Range. Young saplings were found to be killed by this damage.

65. *Animals- -Grazing.*—In a grazing division like this stretching over about 800 square miles from one corner of the district to the other, the incidence of licensed cattle grazing is bound to be high enough to affect the character of the forest. Grazing has its good as well as bad points. It causes direct harm to the regeneration and indirectly inhibits forest growth by the hardening of the soil. At the same time, grass is kept down and the severity of fires is materially reduced.

There can however be no two opinions about the omnivorous goat, commonly reared all along the foothills to the great detriment of the forests.

66. *The spike disease of sandal.*—By far the greatest source of harm, the disease remains yet unconquered and we are in much the same position as several decades ago. Several tentative conclusions were reached in the course of the investigations conducted in Madras and Mysore but none holds the field now and fresh research is being planned.

The disease is prevelant practically everywhere now including the areas found to be free from it in 1932 (*vide* paragraphs 122 to 125 of the 1932 Working Plan).

CHAPTER III—UTILISATION OF THE PRODUCE.

SECTION 1—AGRICULTURAL CUSTOMS AND WANTS OF THE POPULATION.

67. *The growth of population.*—The following information about the taluks which include the forest of the division is taken from the 1951 Census Handbook for Coimbatore district :—

Taluk.	*Total area in square miles.*	*Population in 1951.*	*Desity per square mile.*	*Population in 1901.*	*Variation 1901–1951.*
Gobichettypalayam ..	1,129	394,267	349	196,018	198,249
Bhavani	572	235,170	411	125,234	109,936
Avanashi	493	272,536	553	153,354	119,182
Erode	599	439,641	734	275,460	164,181
Coimbatore	528	562,522	1,065	243,020	319,502

The increase of population during the last 50 years by hundred per cent and more in some taluks (especially Gobichettypalayam which accounts for most of the forest area in this division) is significant; for the pressure of this ever-expanding population is no doubt felt in some manner or the other by these forests; which have hardly held their ground but yielded place to the demands of cultivation in some localities where land-hunger is acute.

68. *The population of the hill villages and settlements.*—Consists of Lingayats or Sivachars, Badagas, Sholagas, Irulars and some Harijans.

69. In recent years, a number of ryots displaced from the village submerged by the Bhavanisagar have colonized formerly unoccupied lands in the Talavadi firka, taking up Sivajama cultivation. The Lingayats and Badagas are professional cattle-breeders. Most of the hill population belong to the Sholaga tribe, a primitive and comparatively honest race. They are the mazdoors, for the Lingayat landlord and the Minor Forest Produce Contractor and the chief labour force for departmental works also.

70. " Tradition says that in days of yore there were two brothers in the Geddesal Hills. Karayya and Billayya or Madheswara. The Uralis and Sholagas are descendants of Karayya and the Lingayats of Madheswara or Billayya. A Rakahasa—Savanan—captured both and made Karayya a shepherd, ill-treated Madheswara and ordered him to make a pair of slippers. Madheswara sought Krishna's help.

"That wily god taught him to make waxen shoes wearing which Savanan was invited to climb up a rock previously heated by fire by Madeheswara. The wax melted; Savanan died. Karayya got angry that Madeheswara had done this treachery without his knowledge and pursued him, and finally pardoned him on condition that first offerings during any worship are made to him. To this day, Sivacharis at Madheswaranamalai offer first to Karayya before worshipping Madheswara." From a "Report on the socio-economic conditions of the Aboriginal Tribes of the Province of Madras by Dr. A. Ayyappan, published by the Government of Madras—Page 128).

71. Where worship stops, however, economics begin and the Lingayat Landlords engage the descendant of Karayya, "under a system of indentured labour not far removed from slaver". With the widening influence of ameliorative agencies like the Harijan Welfare Department, and the Kasturba Trust, the lot of the Sholagas and other hill tribes is improving steadily.

72. *Wants of the population.*—The chief demands of the people on the forest are small timber for building and agricultural implements, fuel for domestic consumption and for cottage industries such as jaggery making, lime and brick-kilns, pottery, etc., pasture and penning facilities for cattle and for bamboos.

73. *Grazing.*—The number of cattle grazed in the forest is very large. Such a large number is maintained by the ryots, chiefly for the farmyard manure obtained. Besides cattle breeding is a popular profession in the region. But the grazing afforded by the Reserve forests is by no means satisfactory and efforts to improve the fodder supply during the past several decades have not made such headway due to inherent difficulties.

74. *Agricultural implements.*—In recent years, modern methods of farming and the use of machinery have been introduced by rich land-owners but among other grounds, uneconomic holdings preclude the possibility of the use of machinery on anything like a popular scale. The requirement of small timber for agricultural implements is as keen as before and must be expected to continue to be so far a long time to come. The ploughshare and the handle, the shaft and the yoke, have all to come chiefly from the forest, the unreserves being quite inadequate for the purpose. Similar is the case with small timber required for rural housing.

75. *Fuel.*—The fuel requirements of villages are not so insignificant as they were in 1932. The pilfering of dry fuel from the reserves in the vicinity of the bigger villages is a common feature.

76. *Manure.*—The use of green manure is comparatively rare and little or no advantage is taken of the facility for free removal of manure-leaf from the fuel coupes, during the year before felling. For silt from tankbeds within reserves the demand is keen in several localities.

SECTION 2—MARKETS AND MARKETABLE PRODUCTS.

77. *Timber.*—During the years 1953–54 to 1955–56, some timber (teak and rosewood chiefly) was extracted from the Thattavadi block of Satyamangalam Range. Standing trees were sold to contractors during the first two years. During the third year, viz., 1955–56, the extraction was departmental and a sale depot was opened at Hassanur and the produce sold in two auctions. There was some apprehension lest the location of the depot at a new place like Hassanur should affect the demand and the prices. But both auctions fetched fairly good prices and the choice of sale depot was justified.

The timber output is likely to be steady, at a low annual level, as according to the present selection felling method, the timber areas such as the Thattavadai block, the Minchgun Valley, the Badguli locality in Geddesal and Germalam beats, the Gundri, Kongadai and Talakkarai areas can all be exploited in succession.

A small number of teak poles are obtained from clearfelling and thinning the Hulikal irrigated teak plantations. The oldest plantation was clearfelled in 1955. Of these poles one hundred to two hundred poles are supplied to the Electricity Department for use as electric transmission poles. The demand for electric transmission poles is pressing and only a tiny fraction of this demand can be met till the large scale irrigated plantations now contemplated materialise and come for felling.

78. *Firewood.*—The demand for forest firewood from the towns in the plains continues to be heavy. The needs of Coimbatore town are met by contractors of Mettupalayam, Bolampatti, Walayar, Attapadi Valley private forest and to some extent in recent years by contractors of Tunacadavu Range. The palmyrah jaggery industry of the Shanars in Bhavani Range, depend upon the faggot fuel collected from the reserves. The arceanut boiling industry at Mettupalayam is an industry that uses up considerable quantities of firewood from the local coupes.

79. *Sandalwood.*—By far the most important produce of the division, sandalwood from this division as well as Kollegal and Nilgiris divisions is sold in auctions held at Satyamangalam twice annually. The usual purchasers hail from Bombay, Kannuj, Kuppam, Mettur and other places. There is occasional demand from the more important temples such as the Madura Meenakshi and Tiruchendur temples. A small quantity of billets is kept in the District Forest Office for retail sale.

80. *Bamboos.*—The output of bamboos especially of *Dendrocalnus strictus* is considerable. Satyamangalam and Bhavani ranges produce the bulk of yield and there are extensive practically untapped bamboo areas in Sathy range. Local consumption in Sathy, Gobi and in villages for domestic and agricultural purposes as well as for basket-making accounts farm part of the produce from Sathy and Thalamalai ranges. Bamboos from Mettupalayam range are partly consumed locally by the thriving basket making industry and partly exported to Coimbatore, Tiruppur, Tiruchirappalli and Thanjavur districts. The outturn of Bhavani range is largely exported to Tiruchirappalli and other towns to the east. Tiruppur and Punjai Puliampatti are important centres for the bamboo trade.

There is a general though limited demand for bamboos in all the plateau villages. some coupes in the hills, inaccessible for lorry transport have earned the nickname, 'ragi coupes' as contractors derive their revenue in kind, i.e., have to take ragi after the harvest, from the ryots, who remove bamboos in headloads.

81. *Other Minor Forest Produce—Gallnuts (Terminalia Chebula).*—Gallnuts are collected in all the ranges of the division but Thalamalai and Sathy ranges produce the bulk of the output. The gallnuts of this division have earned a name for their quality. The chief market is Madras where it is sold in retail. Small quantities go to other tanning centres such as Erode, Coimbatore, Tiruchirappalli, etc.

Avaram bark (Cassia auriculata).—Another tanstuff. This is rather rare except in the unreserves of Talamalai and Sathy Ranges. The bark is consumed at Erode and Tiruchirappalli.

Konnai bank (Cassia fistulla).—This is rather common in Mettupalayam range. The tree is worked on a rotation of three years.

Pungam seeds.—Only a fraction of the large quantities available is collected for export to Bangalore for the collection of an oil used in tanning.

Honey and wax.—The collection of honey and wax is done departmentally. The entire produce is supplied to the Bee-keeping Development Officer, Madras.

Stone and tree moss.—Lichens found on trees and rock are collected on a very large scale. The trade is a profitable one as collection is easy and the produce is available throughout the year in unlimited quantities. The moss appears to be meant for export to Germany for making litmus paper. This item does not seem to be collected on any comparable scale in other divisions.

Flex Oil.—The distillation of essential oils fro from the fragrant grasses of the division was done departmentally till 1952 and the oil was sold to the Kerala Soap Factory, Calicut. Since 1952, lemon grass is offered in sale as an item of Minor Forest Produce in each range but there is practically no response.

Hill grass.—The demand for hill fodder grass from distant plains villages is acute especially; if the lack of timely rains causes scarcity of the agricultural by-products consumed by cattle. The hillocks near Bennari supply hundreds of cartloads of fodder grass.

Deer and Sambhur horns.—There is some demand for the produce, it is said, for export to Germany for making knife handles, etc.

Tamarind.—Tamarind occurs in large numbers in several localities especially in and around abandoned enclosures. The produce is consumed locally.

For the past several years, *Azadirachta indica* (*neem*), *Pungamia glabra* (*Pungam*), *Bassia latifolia* (Iluppai) and *Calophyllum inophyllum* (pinnai) trees are also marked and retained as reserved trees in fuel coupes—but the collection of seed for oil is nowhere organized.

Other small items of minor produce include date leaves (*Phoenix acaulis*) kerai grass, custard apple (Arachalur R.F.) rubber trees (in the reserves near Kunjappanai), shekoi (Acacia concinna), etc.

SECTION 3—LINES OF EXPORT.

82. *Railways.*—The only railway line of some use for the export of forest produce of the division is the broad guage section from Mettupalayam to Erode and Madras (via) Coimbatore. The construction of the Erode-Chamrajnagar rail line does not seem to have been included in the Second Five-Year Plan.

83. *Waterways.*—Waterways are of little or no importance for the transport of forest produce.

4. *Roads.*—Though the division as a whole is served by a good network o froads, large tracts of forest and hill villages and enclosures continue to have very poor communication facilities. These are the Nilgiris eastern slopes, the Melur and Pillur slopes, the Eastern half of the hill areas of Satyamangalam Range and the adjoining Western half of Bhavani Range. The following statement shows the more important roads used in the transport of forest produce :—

List of Roads.

Name of the road or cart tract.	*Authority maintaining the road.*	*Areas served.*
	Satyamangalam range.	
Satyamangalam-Chamarajnagar Road.	Highways Department	Serves fuel coupes at the foot of the plateau and Sandal and Bamboo areas on the plateau.
Hassanur-Bailur-Kollegal Road	Do.	Serves sandal areas on the plateau.
Dhimbam-Kuttadai Road	Forest Department	Serves sandal areas on Kottadai plateau.
Satyamangalam-Anthiyur Road	Highways Department	Used for transport of fuel and bamboos of the various markets.
Satyamangalam-Gobi Road	Do.	Used for transport of fuel to Gobichettipalayam.
Bungalawpudur-Gobi Road	Do.	Do.
Kempanaickenpalayam-Germalam Road.	Forest Department	Serves sandal and bamboo areas on Yekkathur plateau.
Satyamangalam-Coimbatore Road	Highways Department	....
Kadambur-Wakkampalayam Road	Forest Department	Serves sandal and bamboo areas on the plateau round about Gundri, Makkampalayam, etc.

Name of the road or cart-tract.	*Authority maintaining the road.*	*Areas served.*
	Talamalai Range.	
Dhimbam-Talamalai Road	Forest Department ..	Serves sandal areas on Talamalai plateau.
Talamalai-Kunbaragundi Road ..	Highways Department ..	Do.
Saty-Kothamangalam-Bhavanisagar Road.	Do. ..	Serves fuel coupes at the foot of the plateau.
Bennari-Bhavanisagar Road	Do. ..	Do.
	Bhavani Range.	
Athani-Gobi Road	Highways Department ..	Serves fuel areas on the foot of the plateau.
Anthiyur-Bargur Road	Do. ..	Do.
Anthiyur-Tiruppur Road	Do. ..	Do.
Anthiyur-Bhavani Road	Do.	Used for transport of fuel and bamboo to Erode and Bhavani.
	Mettupalayam Range.	
Coonoor-Mettupalayam-Coimbatore Road.	Highways Department ..	Serves fuel and bamboo areas of Mettupalayam Range.
Mettupalayam-Nellithurai Road ..	Do. ..	Serves fuel and sandal areas south o Mettupalayam.
Karamadai-Tholampalayam Road ..	Do. ..	Serves fuel areas near Tholampalayam
Mettupalayam-Kotagiri Road	Do. ..	Serves sandal areas near Kunjapanai.
Mettupalayam-Kil Kotagiri Road ..	Highways and Forest Departments.	Serves the bamboo areas of the Nilgiris Eastern slopes Reserve Forest.
Mettupalayam-Saty Road	Highways Department ..	Used for the transport of sandalwood to Satyamangalam Sale Depot.

SECTION 4—METHODS OF EXPLOITATION AND THEIR COST.

85. *Sandalwood.*—The exploitation of sandalwood is carried out departmentally, at every stage. The extraction, rough cleaning and transport of sandal to Forest Depots are paid for on outturn at the rate of 8 annas per quarter (28 lb.) of rough cleaned wood. Payment for capwood trees is as follows :—

Girth, class of the tree.		*Rate upto 1953–54.*				*Rate since 1953–54 (with a 10 per cent cut imposed).*		
		RS.	A.	P.		RS.	A.	P.
Up to 6″	at	0	0	4	per tree	0	0	4
7 to 9″	at	0	0	8	„	0	0	7
10 to 12″	at	0	1	0	„	0	0	11
over 12″	at	0	1	9	„	0	1	7

Neglecting wastage in conversion, etc., and assuming that one ton of rough cleaned wood yields one ton of final cleaned wood, the cost of exploitation per ton (exclusive of establishment and overhead charges) may be worked out as follows :—

(1) Cost of enumerating and marking trees assuming that 200 trees will yield a ton of harwood) at Rs. 2 per 100 trees	4	0	0
(2) Cost of uprooting rough chipping and transport to forest depot at 8 annas per quarter	40	0	0
(3) Cost of transport to sale depot oer an average lead of 30 miles at Rs. 0-12-6 per ton miles	23	1	0
(4) Final cleaning charges	25	0	0
Total ...	92	1	0

The cost of exploitation may be estimated to be Rs. 92 approximately.

86. *Timber*.—The cost of extraction of teak, rosewood and Silavagai (*Albizzia odoratissima*) timber from Thattavadi block in Sathyamangalam range is as follows :—

(*a*) Felling and conversion (on an average)	2 annas per c.ft.
(*b*) Transport to the sale depot at Hassanoor	5 Do.
(*c*) Construction of shed for mazdoors and of a fair weather lorry track.	1½ Do.
(*d*) Clearing depot site	3 pies per c.ft.
	8 annas 6 pies or about 9 annas per c.ft.

87. *Fuel*.—With the exception of Shanar coupes which are worked on permits, all fuel coupes are worked through the agency of contractors. Payment for felling, stacking and transport is made by contractors on the basis of stacks. A stack generally measures 5 feet by 4 feet by 3 feet or 60 stacked cubic feet and is taken to weigh half a ton. The usual costs are as follows :—

Felling and stacking one stack in the coupe : Re. 1 to Rs. 1–4–0.

Carting one stack : Re. 0–8–0.

88. *Bamboos*.—All bamboos coupe are worked through the agency of contractors and payment is made by them at the following rates :—

Species.	*Local name of produce collected.*	*Cost of collection.* Rate. RS.	A.	P.	For.	*Remarks.*
Bambusa arundinacea ..	Thattai.	0	4	0	each.	
	Odai	0	1	6	,,	
	Mathurai Pottu	6	4	0	100	
	Rasi Poottu	4	2	0	100	
	Kuranai Poottu	3	2	0	100	
Dendrocalambus strictus ..	Vedar	6	0	0	100	
	Nathi	2	0	0	100	
	Karanai	2	0	0	100	

SECTION 5—PAST AND CURRENT PRICES.

89. ***Sandalwood***.—The following statements show (1) the gross prices per ton of sandalwood and (2) the detailed prices per ton of each sandalwood class during the last ten years :—

Statement showing the quantity of sandalwood collected in Satyamangalam depot in the recent past and the amount realised.

Year. (1)	*Quantity sold.* (2)			*Amount realised in the sale depot by sale of wood from North Coimbatore and Kollegal and Nilgiris Divisions.* (3)			*Rate per ton.* (4)			*Quantity obtained from North Coimbatore Division.* (5)			*Net quantity less 5 per cent for deficit in tons.* (6)			*Net approximate revenue from North Coimbatore.* (7)		
	TONS.	QRS.	LB.	RS.	A.	P.	RS.	A.	P.	TONS.	QRS.	LB.	TONS.	QRS.	LB.	RS.	A.	P.
1946–47 ..	220	0	0	9,72,739	13	6	4,421	9	0	125	32	0	119	10	11	5,55,508	11	0
1947–48 ..	129	12	0	2,26,696	1	0	1,786	2	0	64	72	0	61	52	11	1,15,316	13	0
1948–49 ..	160	28	0	5,25,162	8	0	3,275	2	0	97	29	0	93	40	16	3,20,377	10	0
1949–50 ..	249	19	0	8,50,903	4	0	3,414	0	0	71	56	0	68	9	6	2,44,792	2	0
1950–51 ..	249	60	0	9,57,152	7	0	3,731	8	0	118	31	0	112	37	13	5,33,232	13	0
1951–52 ..	284	1	0	10,35,052	7	0	3,724	0	0	227	46	0	216	15	20	7,56,511	3	0
1952–53 ..	400	30	0	10,59,223	12	0	2,629	0	0	308	3	0	292	50	24	8,13,032	1	0
1953–54 ..	369	39	6	10,79,119	3	0	2,943	8	0	181	74	27	172	67	6	5,35,532	1	0
1954–55 ..	360	64	0	11,31,334	0	0	3,135	10	0	236	37	15	224	51	19	7,41,477	8	0
1955–56 ..	341	44	16	15,98,980	10	0	4,681	7	0	194	50	18	184	72	3	9,11,165	0	0

STATEMENT SHOWING AVERAGE PRICE PER TON FETCHED FOR DIFFERENT CLASSES OF SANDAL WOOD AT SATYAMANGALAM DEPOT DURING THE PERIOD OF 10 YEARS AND THEIR NET AVERAGE.

Serial number.	*Class number.*	*Name of class.*	1946–47.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.	1954–55.	1955–56.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
			RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1	V	Chat Badla	4,986	2,403	3,397	3,649	3,722	3,934	2,779	3,040	3,266	5,073
2	VI	Bagardad	4,901	2,382	3,383	3,631	3,826	3,910	2,710	3,124	3,460	5,215
3	VII	Root I class	4,995	2,689	3,710	3,959	4,336	4,350	3,106	3,288	3,507	5,604
4	VIII	Root II class	5,322	2,600	3,799	4,209	4,519	4,530	3,313	3,538	3,720	5,843
5	IX	Root III class	5,719	..	3,873	4,238	4,751	4,722	3,598	3,950	4,127	6,316
6	X	Jajpokal I class	4,583	1,834	3,311	3,502	3,822	3,854	2,685	3,074	3,259	4,816
7	XI	Jajpokal II class	4,390	1,775	3,295	3,459	3,823	3,853	2,676	3,057	3,245	4,711
8	XII	Aihbagar	4,114	1,696	3,294	3,490	3,806	3,824	2,542	2,978	3,246	4,583
9	XIII	Cheria	4,105	1,700	3,285	3,395	3,670	3,743	2,453	2,895	3,151	4,588
10	XIV	Ainchilta	4,200	1,505	3,210	3,235	3,600	3,705	2,350	2,843	3,123	4,653
11	XV	Natrichilta	4,005	1,200	2,509	2,505	3,155	4,000	..	..	..	3,505
12	XVI	Milvachilta	3,019	1,000	2,227	498	2,936	2,800	1,933	2,368	2,478	3,646
13	XVII	Basola Bukini	2,961	920	2,125	..	2,729	2,637	1,957	2,158	2,324	3,384
14	XVIII	Saw Dust	4,100	1,500	3,280	..	3,403	3,253	2,365	2,780	3,055	4,298
		Net average	4,422	1,786	3,275	3,414	3,782	3,725	2,630	2,943	3,164	4,684

Timber, fuel, bamboos and Minor Forest produce.

90. The statements are given in Appendix IX.

CHAPTER IV—STAFF AND LABOUR SUPPLY.

SECTION 1—STAFF

91. *Staff.*—The establishment of the Division as it stood on 1st April 1955 is given in the following statement :—

The establishment of the North Coimbatore Divisin on 1st April 1955.

Description of staff. (1)	*Name of post.* (2)	*Rank.* (3)	*Sanctioned and actual strength.* (4)	*Remarks.* (5)
Administrative ..	District Forest Officer ..	Deputy Conservator of Forests.	1	
Executive	Rangers Territorial ..	....	4	4 Ranges.
	Non-territorial	....	1	S.W. Depot.
Protective	Foresters	....	21	
	Forest Guards	....	55	
District Forest Office establishment.	Head Clerk	....	1	
	Accountant	....	1	
	Lower Division Clerks ..	....	4	
	Draughtsman	....	1	
	Typist	....	1	
	Peons	....	4	
Range Office establishment.	Range Clerks	....	4	
	Range Peons	....	4	
Temporary establishment.	(*a*) Clerical—			
	Sandalwood Clerk ..	....	1	District Forest Office.
	Permit Clerk	....	1	Do.
	Lower Division Clerks ..	....	2	Do.
	Range Clerk	....	1	Saty Range.
	(*b*) Peons (Range) ..	....	1	Talamalai Range.
	(*c*) Protective—			
	Forest Guards	....	7	For Panchayat beats.
	Reserve Watchers ..	....	59	
	Depot Watchers ..	....	2	
	Tapal Watcher	....	1	
	District Forest Office Watcher	....	1	
	Bungalow Watchers ..	....	2	
	Plot Watchers	....	2	

SECTION 2—LABOUR SUPPLY.

92. *Labour Supply.*—Labour scarcity is a limiting factor to any large scale work on the plateau, such as sandal extraction or occasional timber extraction. The Sholagas form our main labour force.

Sholaga coolies are employed for routine departmental works such as sandal extraction, regeneration operations and fire protection. Their numbers are supplemented by Badagas (Kotadai) and Sivachars to some extent. Adi Dravidas at Talamalai are also used for sandal extraction. In Mettupalayam Range, Irulas take the place of Sholagas for all routine departmental works.

For all kinds of road work a professional class of skilled coolies called Odders or Boyans are employed. They are generally recruited in Satyamangalam. The final cleaning of sandalwood at the sale depot at Saty is done by the local Thorayars. The normal mazdoor rate for unskilled labour varies from 12 annas to Re. 1 on hills and from Re. 1 to 1-8-0 in the plains.

SECTION 3—TRIBAL SETTLEMENTS.

93. *Tribal Settlements.*—The coincidence of the harvest season with the beginning of sandal extraction work makes labour more scarce than it is. To counter this and to ensure that the nomadic hill tribes are properly settled and brought under control many settlements have been established in various parts of the division. Land is given to most settlements free of assessment.

The settlements are by no means in a flourishing state. The plains contractors employ them for collection of minor forest products for a number of months and keep them under their firm hold. Improvement in their standard of living is not possible so long as some type of exploitation of their labour exists which denies them the full benefit of their labours.

94. A list of Sholaga, Irula and other settlements is furnished below :—

List of Sholaga, Irula and other settlements in Coimbatore North Division.

Serial number. (1)	*Range.* (2)	*Nature.* (3)	*Name.* (4)	*Families.* (5)	*Reserved Forest.* (6)	*Remarks.* (7)
1	Sathy.	Sholaga.	Uginiam	7	Guthialathur.	Free of assessment.
2	Do.	Do.	Geddesal	35	Do.	Do.
3	Do.	Do.	Vedaparai	13	Do.	Do.
4		Do.	Kambanur	12	Do.	Do.
5	Do.	Do.	Yedakanji	7	Do.	Do.
6	Do.	Do.	Velancombai	3	Do.	Do
7	Do.	Do.	Chinnadurgam	10	Do.	Do.
8	Talamalai.	Do.	Mavanatham	15	Talamalai.	Do.
9	Do.	Do.	Ramaranai	6	Do.	Do.
10	Do.	Do.	Nandipuram	7	Do.	Do.
11	Bhavani.	Do.	Kakkayanur	18	South Bargur.	Do.
12	Do.	Do.	Doddacombai	15	Do.	Do.
13	Mettupalayam.	Irula.	Koravankandi	15	Gopinari.	Do.
14	Do.	Do.	Sorandi	5	Do.	Do.
15	Do.	Do.	Unjaricombai	8	Melurslopes.	Do.
16	Do.	Do.	Parayancombai	10	Gopanari.	Do.
17	Do.	Do.	Thondai	9	Do.	Do.
18	Do.	Do.	Gundur	7	Do.	Do.
19	Do.	Do.	Puchimarathur	9	Do.	Do.
20	Do.	Do.	Aruikandurai	17	Do.	Do.
21	Do.	Do.	Sirukinar	4	Do.	Do.
22	Do.	Do.	Senguttai	15	Do.	Do.
23	Do.	Do.	Nellimarathur	10	Do.	Do.
24	Do.	Do.	Pasumanai	14	Thadagam.	Do.
25	Do.	Do.	Manguli	21	Do.	Do.
26	Do.	Do.	Pillur slopes	15	Pillur slopes.	Do.
27	Do.	Do.	Old Pillur slopes	10	Do.	Do.
28	Do.	Do.	Maricode	4	Aduthorai.	Do.
29	Do.	Do.	Perukkupatti	24	Thadagam.	Cesses to be paid by the lessees annually.
30	Do.	Do.	Perunipatti	9	Do.	
31	Do.	Do.	Kunjurpatty	18	Do.	
32	Do.	Do.	Pulapatti	53	Do.	

SECTION 4—AMELIORATION OF THE HILL TRIBES.

95. *Amelioration of the hill tribes.*—It is heartening to see that many agencies are taking increasing interest in the amelioration of the hill tribes and have introduced medical and educational facilities. These new agencies are the Kasturba Gandhi National Memorial Trust and the Harijan Welfare Department of the Government of Madras. Schools have been opened by the Trust, a non-official agency at Ongalavadi and Kottadai. The Harijan Welfare Department has opened a school at Kunjapanai, which is well established and permanent buildings have been constructed.

CHAPTER V—PAST SYSTEM OF MANAGEMENT.

SECTION I—GENERAL HISTORY OF THE FORESTS.

Early Exploitation.

96. With the defeat and death of Tippu Sultan in 1799, the District of Coimbatore passed in the hands of the East India Company. Before this date sandalwood was a Royal tree over the Sultan's domain.

97. From all available accounts, it appears that organized exploitation of sandalwood in these forests took place for the first time about the year 1860–61. Captain W. H. Morgan, Conservator of Forests with Headquarters at Ootacamund makes a reference to this in his annual report for the year. The method followed was a "regular cutting of all trees which have made heartwood and show signs of decay in their tops."

Regeneration.

98. But exploitation was only one aspect of the activities of those in charge of the forests. With commendable zeal, they set about the regeneration of sandalwood artificially Varied were the attempts and many were the places where they tried to raise pure plantations. At a certain stage, the solution to the problem of regeneration and establishment was thought to be within reach. But the discovery of the root parasitism of the species, came in 1871. It met with partial acceptance at first. Only later, about 1902, was this characterictic of the species accepted beyond question. Then on, the problem of regeneration took a different and a more difficult shape.

Administrative History of the Division.

99. The Forest Department was constituted in 1859 with Dr. H. Cleghorn as Conservator.

100. The Bhavani and Sathyamangalam forests then formed part of the charge (Range) of Major Morgan with Headquarters at Ootacamund, Sathyamangalam and Sigur (in the Nilgiris Divisions) were treated as one unit.

101. The reservation of forests on the South-Eastern slopes of the Nilgiris and the slopes of the Biligirangars in North Coimbatore was first mooted in 1876–77. The forests of Bhavani, Sathyamangalam and Kollegal were thoroughly explored by Mr. Peet in 1884–85 in connection with the selection of reserved forests.

102. North Coimbatore was constituted a division in 1879–80. On the 1st of April 1880, the Anamalai forests which were known as the South Coimbatore division were amalgamated with North Coimbatore and the united division was styled the Coimbatore division. In 1882–83 this was split up again into the North and South Coimbatore Divisions.

103. In 1884–85, North Coimbatore comprised three ranges, viz., Kollegal, Satyamangalam and Bhavani, each in charge of a Ranger, assisted by one Forester and nine Guards in the first named, and one Forester and eight Guards in each of the other two ranges. Prior to 1892, the present Talamalai Range formed part of Satyamangalam range, but in December of that year, it was made an independent charge under a Range Officer.

104. On the 1st of April 1909, the North and South Coimbatore Divisions were further divided into four divisions, North, South and Central Coimbatore and Kollegal. On the 1st April 1909 the North Coimbatore Division consists of Sathyamangalam, Talamalai and Bhavani range. On the 1st April 1910, Bhavani Range was split up into two Ranges, viz., Bhavani (consisting chiefly of the ghat faces and the Palamalai block) and Bargur (consisting of the plateau portions). On the abolition of the Central Coimbatore Division in 1921, Mettupalayam range was transferred to North Coimbatore and Bargur range was given up to Kollegal with effect from 1st August 1921.

SECTION II—PAST SYSTEM, MANAGEMENT AND THEIR RESULTS.

Position as regards working plans.

105. A number of working plans and schemes were in force over the different parts of the division till 1932, when Sri C. R. Ranganathan's working plan embracing the whole division, came into effect. This plan was revised by Sri V. S. Krishnaswamy and the rvised prescriptions were brougt to force from 1942. As the formation of working circles under the two plans is very similar, an assessment of the results achieved in each working circle is feasible.

The Reserve Sandal Working Circle.

106. A six-year felling cycle and the extraction of dead trees have been the central features of the prescriptions for this working circle. It is often seen that the extraction from the annual coupe is not as exhaustive as it should be and unworked portions of coupes are worked as arrear coupes in the succeeding year. Remote and inaccessible areas happen to remain untouched even for a felling cycle or more. This is a defect in working which has to be remedied. The actual yield during the last four felling cycle has completely belied the expectation of the first working plan—that it conforms to a natural statistical law and is more or less uniform. Actually the yield has ranged between wide extremes and has always been erratic. However, one thing is certain. The high yields of the past and of the present cannot continue much longer, as higher girth classes are becoming more and more scarce. The existing division into felling series has worked generally satisfactorily; each forester is ordinarily responsible for extraction from one Reserve sandal and one village sandal felling series.

107. It is only in the sphere of sandal tending and regeneration that the prescriptions of the first plan have had to be given up. At the time of revision, it was decided that general is tending unnecessary for natural sandal and that any creeper cutting which may have to be done can be done at the time of enumeration. Further attempts to raise sandal artificially were also discontinued as the numerous propagation centres and strip regeneration experiments had not resulted in any sustained success.

108. The revised plan setforth proposals to raise sandal in plantations by the kumri method experimentally in two localities, viz., one at Talamalai and the other near Guthialathur settlement. However, without keen and compelling enthusiasm on the part of the staff, no kumri can take shape; especially so when large areas of unreserves were available for cultivation and the demand for kumri was not pressing. So this prescription has remained in-operative. While the mystery of the spike disease continues unsolved, it will be unwise to think of any large scale artificial work but that should not preclude the territorial staff from making inexpensive and sustained efforts to introduce sandal in non-sandal areas in the sandal zone. There is the remarkable example of some felled coupes of Kongarapalayam fuel series where the species was introduced by broad casting seed some twenty years ago and a dense stand of sandal saplings covers over ten acres now. But a reorientation of our policy and procedure with regard to the question of patta sandal is imperatively called for. That a great measure of progress is possible even within the framework of the existing laws (without having recourse to fresh legislation to keep out the private trader), is shown in part II. The first working plan stressed the need for controlling the clearing of unreserves for Sivaijama cultivation but practically nothing could be done in this direction. Rich sandal bearing unreserves were gradually brought under this type of cultivation, with the depletion of sandal as an inevitable consequence.

109. A complete enumeration of trees over 6 inches in girth has been carried out by the working plan staff, in the patta lands and unreserves in this working circle. The total stand now consists of 1,36,807 trees over 6 inches girth (against 2,60,362 trees counted in 1931–32 over the area).

Fuel Working Circle.

110. Ranganathan's plan constituted a Fuel Working Circle of 65,340 acres with 26 felling series. Practically all areas along the reserve margin on the plains where the growth is adquate and the terrain is favourable were included in this working circle.

A uniform rotation of 40 years was adopted for all series except Mettur for which a rotation of 30 years was prescribed. The usual felling rules were prescribed.

111. Regeneration was mainly by coppice, and supplemented by rab sowings. But the method had no sustained success as rab regeneration almost invariably disappeared after a few yars. The entire working circle was closed to grazing. But this was a very unpoular prescription as it meant the denial to the cattle their most frequented grazing grounds. The prescription could not be given effect to on account of popular clamour and the prescription itself was amended in 1935 and the closure restricted to a period of five years including the year of felling.

112. Under the second working plan, a new feature was the creation of four reserve felling series, to meet the heavy demand for charcoal for producer gas vehicles. One (of area 2,479 acres) was situated in Nilgiris Eastern slopes Reserved Forest, another (of area 2,345 acres) in Guthialathur Reserved Forest near Germalam, the third (of area 513 acres) in Barabetta Reserved Forest and the fourth (of area 1,017 acres) in Guthialathur Reserved Forest (near Guthiyalathur). Large coupes were laid out in these four series and worked. The first (Mettupalayam Reserve Series) and the third were completed and of the other two, the Guthiyalathur and Germalam series, a major portion, was covered before further exploitation was given up due to lack of demand in one case and to undesirability of opening up the area in the other.

113. Since the war, petrol ceased to be the rate commodity it was, and diesel oil appeared on the scene and has been acquiring ever increasing popularity. The demand for charcoal fell off and is non-existent now. Even in fuel coupes, the contractor can no longer burn charcoal without the specific prior sanction of Government; this order was introduced a few years ago.

Fuel Plantation Working Circle.

114. Under the second plan, 4,038 acres suitable for kumri Regeneration were constituted into a working circle where artificial regeneration by kumri method was to be done. Four series were formed, viz., Anthiyur, Mettupalayam, Sathyamangalam and Kothamangalam. Of these, only in Mettupalayam series some work was done over 90 acres. The kumries of 1941 and 1942 are comparatively successful. Subsequently, the work became steadily poorer in quality. In Anthiyur series, compartments 1 and 2 were felled; but the only work done was to dibble seeds of Acacia arabica in 2,000 pits and the plants are farming well. There is no sign of any kumri work done in Sathyamangalam range. No work was done in Talamalai Range.

Bamboo Working Circle.

115. Under the second plan, the distinction between commercial and regular series divided into two classes, i.e., the commercial section consisting of accessible localities where extraction could be done on commercial lines and the village section consisting of less accessible localities where the extent of extraction depended on local needs. The commercial section consisted of 19 felling series with two reserve felling series (called reserve series since organized extraction depended on the creation of a road system). The village section consisted of six felling series. Each series was divided into 3 annual coupes.

116. Under the second plan, the distinction between commercial and regular series was abolished and all coupes were to be leased out in open auction. The two reserve series were also to be considered as regular series thereafter.

117. Due to various reasons, the road system proposed in the Gundri region did not take shape. Rough fair weather tracks lead into the coupes and suffice for the usual type of exploitation of accessible areas, over the two former reserve series (Gundri east and Gundri west series).

Shanar Pollard Working Circle.

118. This was constituted under the first plan to meet a special local demand for faggotwood For the palm jaggery industry in Mathur, Marapalayam and Valli Tiruppur villages of Bhavani range, the poor shanar families engaged on it need a regular supply of fagoot fuel during the season, viz., January to June every year. As the previous arrangements to meet the demand from local fuel coupes were unsatisfactory, an area of 885 acres was set apart under the first plan and divided into 8 compartments. One compartment was to be worked every year between January and June. Contrary to usual belief, it was found that pollarding did little or no harm to the trees common in the area. Hence pollarding on an eight year felling cycle and removal on permits were the features of the system of working. The second plan continued the same features and added on to this working circle an area of 352 acres for concentrated regeneration of plantations to meet this particular demand. Again, regeneration does not appear to have been seriously attempted. The Jarthal-Chennampatty kumries of 1947–52, which were a classic instance of squatting by kumridars and which required several years of the strongest efforts on the part of the department to evict the kumridars, are not far off and it is not hard to see why further kumri was not attempted in the locality.

Small Timber Working Circle.

119. This was formed under the first plan, designed to cater to the need of the plateau villages for small timber for agricultural and domestic purposes. The Working Circle consisted of ten felling series. The mode of working proposed was elastic and took into account local predilections in the choice of ploughs and other implements. In spite of this, however, the ryots were not inclined to take advantage of the provision and the prescriptions remaind a dead letter until 1940 when they were formally deleted from the plan. The second plan did not revive the prescriptions.

120. The clamour for revival of the long-dead and pernicious permit system has nevertheless continued. Such indiscriminate exploitation will run counter to all accepted principles of forest conservancy.

Podu Working Circle.

121. Under the first plan, regeneration of a blank area of 22 chain square in Minchiguli valley by kumri method, was prescribed. Though the work seems to have been undertaken with a good deal of enthusiasm, it was not a success thanks largely to browsing by game, excessive growth of sword grass and the consequent fire hazard. The prescriptions were given up later.

Grazing Working Circle.

122. Under the first plan, the entire forests of the division, except the area under fuel working and regeneration were thrown open to grazing. In 1934–35, due to public clamour the closure of the fuel working circle was reduced to closure of worked fuel coupes for five years including the year of felling and penning fees were abolished and penning was allowed free of charge. The latter was a step in the right direction as penning tends to distribute the incidence of grazing more evenly over the entire working circle but the opening of fuel compes was silviculturally very undesirable and has served to inhabit the already poor regeneration of valuable species.

123. Under the second plan, prescriptions were made for the introduction of deferred and rotational grazing. When worked fuel coupes were thrown open to grazing, they were formed into rotational grazing blocks. But these perscriptions remained only nominally in force and practically became a dead letter in recent years. There was no keenness or enthusiasm on the part of the public.

Lac Working Circle.

124. An area of 445 acres near Mavanatham with a pure stand of *Shorea talura* was constituted into the Lac Working Circle. Shorea brood lac was got from Denkanikota. The attempt ended in loss. An effort was made to infect *Zizyphus* at Hassanur with

kusum broodlac. This was also unsuccessful and had to be given up in 1942. The summer in these areas seems to be far too hot for prolonged periods for any success in lac cultivation and the soil and climatic factors do not favour the rapid development of good shoots by pruning.

Brake Pole Working Circle.

125. There exists a steady demand for breakpoles for use by cartmen when they descend the Dimbam ghat. In order to put an end to the pilfering of poles and to provide a legitimate source of supply a series of coupes had been formed around Dimbam even before the first plan was drawn up. This provision was embodied in the miscellaneous regulations of the first plan and as a separate working circle in the second plan. In the second plan, a suggestion to raise special plantations of *Eucalyptus rostrata* and tereticornis and casuarina, for the purpose of meeting the demand was made but does not seem to have been pursued.

Minor Forest Produce Working Circle.

126. Apart from sandal and bamboos, the chief item of minor forest product in this division is gallnuts. The other items of some importance are, honey and wax, deer horns, tamarind, fodder grass, tree moss, avaram bark, and konnai barks. Honey, wax and deer horns have been collected departmentally for quite a long time. For the last three years, honey and wax are disposed of under instructions from Bee-keeping Development Officer, Madras, and auction sales have been discontinued. The right of collection of each of the other items singly or in groups is sold in open auction.

Irrigated teak plantations.

127. The idea was set forth in the chapter on miscellaneous regulations in the first plan. Work on raising teak under irrigation from the Coonoor river was started in 1932. An area of 2 acres in Hulikaldrug reserve which was commanded by the irrigation channel passing through the reserve was selected and teak was raised by the kumri method. The attempt was a success. The experiment was repeated over adjoining areas in 1933 and 1934. Due to scanty supply of water, the work was given up during 1935 and resumed in 1936. Every year about an area of 2 to 5 acres was regenerated with teak stumps. Several experiments were conducted by the Provincial Silviculturist to determine the best mode of watering and finally watering twice a week by percolation was adopted. Nearly 55 acres of teak plantations have been successfully raised at an average cost of Rs. 24 per acre up to 1949, when the available area was exhausted. Since 1952, casualties have occurred in the older plantations, trees dying in groups, apparently because soil and climatic factors are incapable of supporting a mature stand of teak which makes great demands by way of nutrition and water on the soil. However, the locality is ideal for a short rotation teak crop meant for production of electric transmission and other poles. In fact the yield from the 1932 and 1933 plantations clear felled in 1954 and 1955 respectively have amply justified the expectations.

Timber operations.

128. The second working plan proposed to extract the timber trees in Pulinjur-Thattavadi block in Sathyamangalam range, on a selection basis. The enumeration done by the working plan staff showed the following number of trees over 3 feet in girth.

	Number of trees.	*Expected outturn.*
		C.FT.
Teak	696	6,965
Rosewood	258	8,647
Vengai	129	3,888
	1,083	22,520

129. Working of timber was taken up only in 1951 when 1,008 trees of these three species as well as *Albizzia oderatissima* were enumerated. Of this, 504 trees were offered for sale during 1952. The price fetched was Rs. 28,005. The extraction was completed during 1952–53. The remaining 500 trees were sold for Rs. 17,510 and extracted during 1953–54. From 1954–55 onwards departmental extraction was taken up. There is room for an annual outturn of about 4,000 to 5,000 c.ft. of timber from the few scattered timber areas of the division.

Lemon Grass oil extraction.

130. The following is an extract from Mr. N. D. Sahni's field inspection notes for 1949, and gives the history of lemon grass oil extraction :—

" Distillation of flex oil was started in this division in 1942–43 (actually in 1941–42 by the Working Plan staff). The Kerala Soap Institute agreed to take the entire quantity produce at Rs. 9 per lb. The price was increased to Rs. 11 per lb. from April 1944 and again to Rs. 14 from November 1944 on account of the increase in labour charges and thus in cost of production. The rate of Rs. 14 is being continued. The Officer-in-charge of the Institute now wants the rate to be reduced to Rs. 10 or thereabouts on the plea that the prices of other essential oils have come down. The matter has been referred to the Forest Utilisation Officer and Chief Conservator of Forests and final decision has not yet been taken. The Kerala Soap Institute has since refused to take further supply at the existing rate. The whole question arises if it is worthwhile continuing the distillation. When originally distillation was started it was hoped that on knowing its profits, private enterprise would step in and take it up. We have demonstrated what can be done in the matter. In spite of efforts made no private concern is willing to come forward to take up the concern. It is therefore for consideration if the departmental distillation should not be closed. I am of opinion that it need not be continued.

Details of production of oil with costs from 1945–46 to end of 1948–49 are appended below :—

Year.	*Yield in lb.*	*Total cost.*	*Average cost per lb.*			*Rate charged to soap factory.*			*Profit.*		
(1)	(2)	(3)	(4)			(5)			(6)		
	RS.	RS.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
1945–46	111	959	8	10	0	14	0	0	1,507	4	0
1946–47	85	712	8	6	0	14	0	0	287	7	0
1947–48	186	1,248	6	12	0	14	0	0	917	0	0
1948–49	180	1,295	7	3	0	14	0	0	1,225	0	0

Up to end of 1948–49, there were three stills working. In 1949–50, six new stills have been installed at a cost of Rs. 3,020. On th day of inspection, 5 were actually working. It is estimated that by working the six stills the cost of production can be brought down but final results can be ascertained only at the end of the year.

Paragraph 158 of the revised draft working plan prescribes raising special plantation of fragrant species and has suggested that plantation of Cymbopogon martini (Motia) and Ocimum species be raised on an experimental scale in suitable localities. Nothing has been done so far and with the arising of the present situation dealt with in paragraph 81, I don't think it is worth raising the plantations in the future. " As a result, the operations were discontinued subsequently.

Fire protection.

131. Fire protection by early burning and fire tracing footpaths, cart tracks were given up in view of the doubtful utility and high cost of the measures. Cart stands and other spots exposed to fire hazard are being fire traced, and the District boundary between Nilgiris district and Coimbatore district and the State boundary along Mysore border are being fire traced annually. The sholas near Geddesal are being protected by cutting firelines and fire tracing these lines.

Panchayat forests.

132. The following class III reserves whose main utility was to meet the local grazing needs were entrusted to Panchayats in between the years 1928 and 1951. Before they were handed over to the panchayats, these forests were being worked for fuel; Velamundy Reserved Forest which then contained sandal was worked for sandal also and a sandal felling series was opened in it.

133. These Panchayats were enjoined to protect the reserves from illicit fellings and over grazing while they were allowed to collect revenue at fixed rates from grazing, collection of dry fuel and thorns and quarrying of metal. The panchayats had to pay an asssesment as follows :—

Serial number.	*Name of Reserve Forest.*	*Name of Panchayat.*	*Area in acres.*	*Assessment.* RS.
(1)	(2)	(3)	(4)	(5)
1	Nellimalai	Tekkampatti	1,314	50
2	Odanthorai	(*a*) Odanthorai	1,500	120
		(*b*) Alati	1,372	120
		(*c*) Vajjirampalayam ..	3,195	240
3	Modur and Pethikuttai	(*a*) Modur	3,379	200
		(*b*) Sirumugai	1,721	110
4	Velamundy	(*a*) Alampalayam ..	1,392	100
		(*b*) Periakallipatti	2,139	100
		(*c*) Panayampalli	2,418	100
		(*d*) Shenbagapudur	1,490	60
5	Thoppanpalayam	Thoppanpalayam ..	2,980	100
6	Volpadi	Dalavoipalayam ..	682	340
7	Villikaradu	Punjapalathazuvu ..	278	110
8	Chennimalai	Chennimalai ..	873	345
9	Arachalur	(*a*) Ekatampalayam ..	824	320
		(*b*) Arachalur	1,084	443

134. Though these Panchayats were required to plant up annually small areas of 5 acres or 10 acres, it was never done except in Odanthorai Reserved Forest where about one acre of teak was raised under well irrigation. The Panchayat of Odanthorai had installed an electric motor and pump set to pump out water for irrigating the teak and for providing drinking water for cattle. The teak plantation was not protected well and as a result quite a large number of teak poles have been felled illicitly. Protection with the singular exception of Chennimalai Panchayat, was very unsatisfactory with the result that these forest areas have become more or less denuded at present.

SECTION III—SPECIAL WORKS OF IMPROVEMENTS UNDERTAKEN.

Artificial regeneration of sandal.

135. The first plan proposed the opening of a number of sandal propagation centres. Within a few years, the conclusion was reached that no sustained success was possible that way. Mr. C. R. F. Williams summed up the position as follows (in his field inspection notes of 1942) :

> " Attempts to regenerate sandal by propagation centres have not been successful; not that the growth of the young sandal failed uniformely, but where success was obtained, spike has attacked the young trees, and killed them off before any heartwood could be formed. The District Forest Officer showed me several places where he had obtained good regeneration results when he was previously in the Division, and where no sign of sandal now can be found. For this reason the new Working Plan is to prescribe raising sandal in concentrated plantations in conjunction with spike resistant hosts.
>
> This is already being attempted in Guttiyalathur Sholagar settlement, where in 1941 seeds of spike resistant tree hosts were shown over an area of 10 acres, together with an agricultural crop. Germination was good, and results in August 1942, were satisfactory.

Sandal is being sown with the North-East Monsoon this year. There seems to be no reason why the result should not be excellent, but with Sholagar cultivators, to ensure this, very considerable supervision and encouragement will be necessary. The method will be extended elsewhere wherever opportunity offers". Later the Sholagars left the Guthiyalathur Settlement and this attempt also failed. A sustained attempt to raise sandal in kumri has therefore not been made yet.

Grazing research.

136. Mr. V. G. Darrington has admirably summed up the programme and results of grazing research carried out in the division (in his field inspection notes for 1945), as follows :—

"As a result of Mr. Wilson's report on grazing communicated in G.O. No. 1642, dated 13th August 1942, Government approved the suggestion to carry out experiments in Pasture Research, fences, and Hot weather fodder supplies. The experiments were carried out in this division under Mr. Wilson's supervision. For various cogent reasons, the scheme had to be closed down after four years. The results have been tabulated and have been communicated to all Conservators and District Forest Officers in Chief Conservator's Proceedings Mis. No. 135 of 1945, dated 19th June, 1945. The report as a whole will repay study, but for the sake of ready reference, some of the main problems on which decisions have been reached are indicated below.

Experiments in overgrazed pasture, i.e., areas which have been open to unrestricted grazing over many years.

(a) *Carrying capacity.*—Experiments show that this must not exceed 4 acres per cow unit.

(b) *Erosion control.*—The most successful area is one of 42 acres near Attani, where very degraded pasture was dealt with by bunding gullies, and introducing Kolukattai grass after ploughing. By 1944–45, the pastures had been so improved that 25 cattle were willingly paid for at the rate of nearly Rs. 5 each, for the privilege of grazing rotationally from June or July till February. This represents an intensity of 1.7 acres per cow unit.

Experiments in pastures which have improved naturally, i.e., in areas which had enjoyed a period of not less than five years complete closure against grazing.

(a) Carrying capacity. Experiments show that such areas can safely carry for a limited period. One cow unit per 2½ acres, if grazed rotationally; or 1 cow per 3 acres, if their movement is uncontrolled.

These small scale experiments have been confirmed in 15 grazing blocks, totalling some 5,000 acres. For the last two years, these areas have carried 1 cow unit per 3½ acres with no deterioration to the pasture.

(b) Period of utilization of the pasture. Experiments show that, subject to strict control over overgrazings, the earlier the pasture can be opened, an the longer it can remain open to grazing, the better.

(c) *Manures, to improve the pasture.*—Experiments show that farm-yard manure is the only one of those tried which showed any marked results. With extensive pastures, this can be only of academic interest.

Experiments in pastures improved artificially by the introduction of Kolukattai Grass.

Experience shows that this grass is easy to introduce, but that cattle graze it in preference to and the detriment of natural grasses. In such cases, Kolukattai persists only for about 4 years in a pasture. It is believed that the contouring of pastures, by loose stones or trenches, and the plugging of gullies, leading to an improvement of the natural grasses, is preferable to the introduction of Kolukattai".

Gallnut planting.

137. The first working plan prescribed an experiment with *Termanalia chebula.* One year old transplants or stumps were to be planted along selected road margins. After repeated attempts for several years, the following conclusions were reached in 1940 and further attempts discontinued under the orders of the Chief Conservator of Forests.

138. No difficulty was experienced in obtaining the germination of the seeds in the nursery beds. In no single case however, was any success obtained by transplanting or stump planting. Two year old seedlings were as small or smaller than they were when put out and showed no promise of growth. From extensive inspections of hill areas where the species exists naturally, it was observed that there was ample advance growth of the species on the ground and if only fire portection is assured, there would be no difficulty in getting it to grow.

Conservator's plots.

139. Large scale attempts at concentrated regeneration of fuel species were made during the years 1953, 54 and 55 in the degraded forests of the division. After spectacular initial success in some cases, no lasting results could be achieved and the regeneration areas are almost all dismal failures. These plots were called ' Conservators ' plots.

140. The comparatice success of the kumri areas, in some cases side by side with these costly failures, holds a lesson that yet needs to be driven home to many.

Eucalyptus and other plantations.

141. With a view to suppressing the unpalatable grass stands over extensive areas near Geddesal and Yekkattur that came in as a result of the working of the reserve fuel series and opening up of the first, experimental plantations of Eucalyptus Citriodora and rostrata and Acacia Mollissima were raised in 1953, 54 and 55. Wattle failed, but the initial results with Eucalyptus were encouraging. However, fires take a recurring toll, despite preventive measures adopted, and there is little point in raising any but the most fire hardy species as well as the most valuable species in these fire swept hills.

SECTION IV—PAST YIELD.

142. Detailed figures of out-turn for the various working circles are furnished in appendix.

SECTION V—PAST REVENUE AND EXPENDITURE.

143. The following statements give particulars of revenue and expenditure over a series of years :—

Consolidated statement of Revenue realised in the past 15 years in North Coimbatore Division.

Year.	Removed by Government Agency.				
	Timber.	*Fuel.*	*Sandalwood.*	*Bamboo.*	*Other produce.*
(1)	(2)	(3)	(4)	(5)	(6)
	RS. A. P.	RS. A. P.	RS A. P.	RS. A. P.	RS. A. P.
1941–42 ..	1,605 15 2	3 0 0	2,20,442 2 0	8 15 0	2,674 0 0
1942–43 ..	1,793 5 2	3 12 0	4,08,305 9 3	..	2,020 8 8
1943–44 ..	2,256 10 11	1,960 10 0	3,57,694 0 6	..	3,710 13 0
1944–45 ..	551 0 9	—	5,68,565 2 6	..	3,935 12 0
1945–46 ..	634 9 9	—	6,52,381 8 0	..	4,642 14 0
1946–47 ..	3,501 15 6	170 0 0	9,73,796 11 9	..	2,970 4 3
1947–48 ..	4,116 14 0	—	2,28,073 14 2	..	4,805 4 0
1948–49 ..	5,857 10 2	—	5,32,668 6 7	..	6,130 2 9
1949–50 ..	5,823 11 8	—	8,54,377 12 9	..	3,014 10 0
1950–51 ..	1,019 14 3	46 0 0	8,68,074 15 6	..	1,180 0 0
1951–52 ..	979 5 6	411 8 0	11,26,220 5 9	..	916 3 0
1952–53 ..	170 12 3	268 9 0	9,78,309 5 9	..	1,671 12 0
1953–54 ..	359 11 0	900 0 0	11,56,246 0 3		75 0 0
1954–55 ..	1,707 9 3	255 3 0	9,68,114 2 0	..	787 2 6
1955–56 ..	10,319 1 7	327 8 0	8,91,896 0 0		338 8 0
Total ..	40,698 2 11	4,346 2 0	1,07,85,166 0 9	8 15 0	38,872 14 8

Year.		Renewed by purchasers of consumers.						
		Timber.	Fuel.	Bamboo.	Grazing.	Minor forest produce.	Miscellaneous includes from fines, forfeitures drift wood and other sources.	Total.
		(7)	(8)	(9)	(10)	(11)	(12)	(13)
		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1941–42	..	3,308 0 0	27,229 8 0	20,626 10 9	22,396 6 0	10,367 1 0	15,384 14 11	3,24,046 10 4
1942–43	..	872 14 0	49,784 2 0	21,543 8 0	24,345 8 0	11,172 8 0	12,249 15 10	5,32,091 10 11
1943–44	..	5,561 7 9	79,859 2 1	43,417 8 0	25,169 14 0	22,162 15 0	17,198 4 8	5,58,990 11 11
1944–45	..	936 8 0	59,352 7 7	53,655 12 0	28,096 4 0	21,587 7 0	27,845 5 11	7,64,526 2 9
1945–46	..	173 14 0	60,366 4 2	68,000 0 0	23,568 12 0	19,429 12 0	25,592 7 7	8,54,790 1 6
1946–47	..	1,715 3 0	1,37,469 2 0	92,409 4 0	30,075 0 0	26,143 8 0	22,574 1 7	12,90,825 2 1
1947–48	..	236 15 0	1,78,371 5 0	77,091 0 0	25,702 2 0	40,556 12 0	38,970 1 3	5,97,924 3 5
1948–49	..	552 12 0	1,58,531 8 10	62,004 0 0	28,973 0 0	33,505 10 0	25,087 10 10	8,52,310 13 2
1949–50	..	1,022 6 0	1,87,363 6 0	67,343 8 0	27,361 0 0	33,159 13 6	29,770 14 3	12,09,237 2 2
1950–51	..	10,424 0 0	1,78,393 14 0	83,323 0 0	33,028 0 0	33,962 3 3	30,959 15 0	12,40,411 14 0
1951–52	..	318 0 0	1,00,923 6 0	79,856 0 0	25,376 8 0	43,946 7 6	60,435 0 4	14,39,382 12 1
1952–53	..	28,968 9 3	1,08,426 2 0	66,066 0 0	28,167 2 0	25,627 4 0	25,133 13 9	12,62,809 6 0
1953–54	..	34 2 0	24,015 12 0	53,359 0 0	24,506 2 0	30,341 9 9	29,936 15 0	13,19,774 4 0
1954–55	..	13,243 0 0	35,079 10 6	67,529 0 0	24,014 14 0	27,544 5 0	25,718 5 4	11,63,993 3 7
1955–56	..	4,823 1 6	58,449 0 0	74,687 0 0	30,485 6 0	34,351 0 0	39,066 15 3	11,44,743 8 4
Total	..	72,191 4 6	14,43,614 10 2	9,30,911 2 9	4,01,265 4 0	4,13,858 4 0	4,34,924 13 6	1,45,57,857 10 3

Consolidated statement of expenditure incurred in the past 15 years in North Coimbatore Division.

Year.	*Conservancy and works.*				
	Exploitation by Government Agency.				
	Timber.	*Fuel.*	*Sandalwood.*	*Bamboo.*	*Other products.*
(1)	(2)	(3)	(4)	(5)	(6)
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1941–42	767 13 6	..	18,446 15 0	4 8 0	875 0 9
1942–43	247 13 0	..	15,026 11 4	..	516 5 0
1943–44	94 14 0	..	13,436 14 1	—	526 6 0
1944–45	103 14 0	..	23,590 13 0	..	516 12 6
1945–46	103 13 0	..	24,861 5 8	..	539 15 0
1946–47	1,813 5 0	10 4 0	15,069 0 8	..	1,265 3 0
1947–48	65 9 0	..	11,814 0 9	..	1,827 12 0
1948–49	1,071 8 0	..	19,787 13 8	..	2,337 15 11
1949–50	55 11 0	30 0 0	18,794 6 4	..	4,882 0 9
1950–51	130 5 0	..	32,430 4 3	..	193 0 0
1951–52	66 5 0	..	38,824 4 4	..	174 12 0
1952–53	23 14 0	..	52,871 4 3	..	583 2 0
1953–54	90 11 6	..	31,237 5 2	..	186 5 0
1954–55	18 2 0	..	38,289 15 1	..	303 9 0
1955–56	2,196 0 0	..	32,961 7 5	..	142 15 6
Total	6,849 10 0	40 4 0	3,87,442 9 0	4 8 0	14,871 12 5

Year.	*Conservancy and works—*cont.					
	Purchasers or consumers.	*Live Stock stores and tools.*	*Confisated produce . refunds drawbacks.*	*Communications and buildings.*		
				Roads.	*Buildings.*	*Other works.*
	(7)	(8)	(9)	(10)	(11)	(12)
	RS. A. P.	ES. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1941–42	6,585 7 0	317 11 10	..	6,391 8 1	2,020 3 0	65 11 0
1942–43	8,344 11 6	438 13 0	..	7,373 0 0	1,512 0 0	303 13 0
1943–44	10,648 3 0	92 14 0	..	8,189 15 6	1,970 2 0	37 11 0
1944–45	12,490 8 0	165 1 0	..	11,902 5 0	1,867 2 2	167 9 0
1945–46	16,429 9 0	284 11 3	..	15,570 6 0	2,201 2 3	174 13 0
1946–47	17,713 3 0	506 13 0	..	17,834 12 0	3,047 5 5	215 4 0
1947–48	18,546 9 0	371 7 3	..	15,813 9 0	4,348 6 9	188 12 0
1948–49	18,954 13 0	573 8 3	..	21,757 5 7	3,947 5 9	149 14 0
1949–50	18,893 4 3	485 2 9	..	24,481 2 6	5,388 4 1	240 9 9
1950–51	2,490 4 0	276 9 0	..	8,317 4 0	829 6 0	265 0 0
1951–52	1,851 10 9	516 11 0	..	30,016 12 3	3,283 5 3	539 1 9
1952–53	2,204 5 0	324 7 6	..	17,654 9 9	7,074 6 3	707 11 0
1953–54	1,974 11 0	470 3 6	..	16,061 13 6	6,865 1 6	15 0 0
1954–55	1,985 4 0	559 8 7	..	21,127 5 0	6,883 0 9	404 5 6
1955–56	1,757 0 0	359 0 9	..	13,986 7 0	5,027 11 3	104 8 0
Total	2,39,269 6 6	5,742 10 8	..	2,36,478 3 2	56,268 14 5	3,579 11 0

Consolidated statement of expenditure incurred in the past 15 years in North Coimbatore Division—cont.

Year.	*Conservancy and works*—cont.				
	Organization and Improvement of Forests.				*Total under Conservancy of works.*
	Survey and demarcation.	*Sowing and planting.*	*Fire protection.*	*All other charges.*	
	(13)	(14)	(15)	(16)	(17)
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1941–42 ..	..	642 8 9	572 12 0	5,600 15 1	42,298 2 0
1942–43 ..	6 0 0	1,217 15 0	9 0 0	4,174 8 8	39,071 4 6
1943–44 ..	..	1,140 15 0	564 14 0	3,313 11 9	40,016 8 4
1944–45 ..	..	630 15 4	373 6 0	3,231 11 1	55,040 1 1
1945–46 ..	214 6 0	479 1 0	280 8 0	1,808 2 4	62,947 12 6
1946–47 ..	554 0 0	1,533 7 0	333 14 0	2,116 0 7	62,012 7 8
1947–48 ..	70 0 0	712 7 0	306 6 0	698 10 11	54,763 9 8
1948–49 ..	..	664 13 0	333 0 0	886 15 3	70,465 0 5
1049–50 ..	398 0 0	903 11 0	..	1,185 11 3	68,737 15 8
1950–51 ..	369 0 0	262 15 3	360 10 0	881 2 4	64,805 11 10
1951–52 ..	..	1,575 15 0	477 10 0	1,400 6 2	96,726 13 6
1952–53 ..	..	2,127 14 0	456 10 0	1,921 1 11	1,04,949 8 8
1953–54 ..	499 15 9	14,856 14 9	336 9 6	4,237 8 0	94,232 3 2
1954–55 ..	568 15 0	30,624 4 0	664 0 0	8,173 0 1	1,27,201 5 0
1955–56 ..	..	2,250 1 0	249 7 0	646 11 4	75,081 5 3
Total ..	2,680 4 9	59,623 13 1	5,321 10 6	40,276 4 9	10,58,449 10 3

Year.	*Conservancy and Works*—cont.			
	Establishment.			*Grand Total.*
	Pay and allowances.	*Contingencies.*	*Total.*	
	(18)	(19)	(20)	(21)
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1941–42 ..	68,418 1 0	2,018 8 0	70,436 9 0	1,12,734 11 0
1942–43 ..	74,393 6 9	5,752 13 3	80,146 4 0	1,19,317 8 6
1943–44 ..	75,191 8 0	3,205 3 8	78,396 11 8	1,18,413 4 0
1944–45 ..	74,239 12 3	3,168 12 3	77,408 8 3	1,32,448 9 4
1945–46 ..	91,588 2 0	3,471 1 9	95,059 3 9	1,58,007 0 3
1946–47 ..	97,753 9 0	5,318 5 5	1,03,071 14 5	1,65,084 6 1
1947–48 ..	1,12,099 0 6	7,937 13 8	1,20,036 14 2	1,74,800 7 10
1948–49 ..	95,115 6 0	5,898 14 3	1,01,014 4 3	1,71,479 4 8
1949–50 ..	1,09,918 2 0	3,333 9 4	1,13,251 11 4	1,81,989 11 0
1950–51 ..	1,06,609 9 0	3,060 6 11	1,09,669 15 11	1,74,475 11 9
1951–52 ..	99,811 7 3	3,162 10 0	1,02,974 1 3	1,99,700 14 9
1952–53 ..	1,12,255 1 0	3,890 12 6	1,16,145 13 6	2,21,095 3 2
1953–54 ..	1,26,340 6 0	4,496 8 4	1,30,836 14 4	2,25,069 1 6
1954–55 ..	1,21,587 8 3	4,949 6 6	1,26,536 14 9	2,53,738 3 9
1955–56 ..	1,14,265 7 0	6,908 7 10	1,21,173 14 10	1,96,255 4 1
Total ..	14,79,586 5 9	66,573 5 8	15,46,159 11 5	26,04,609 5 8

Statement showing the Financial results for Coimbatore North Division for the last 15 yars.

Year.	*Revenue.*			*Expenditure.*			*Profit.*		
(1)	(2)			(3)			(4)		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
1941–42	3,24,046	10	4	1,12,734	11	0	2,11,311	15	4
1942–43	5,32,091	10	11	1,19,317	8	6	4,12,744	2	5
1943–44	5,58,990	11	11	1,18,413	4	0	4,40,577	7	11
1944–45	7,64,526	2	9	1,32,448	9	4	6,32,077	9	5
1945–46	8,54,790	1	6	1,58,007	0	3	6,96,783	1	3
1946–47	12,90,825	2	1	1,65,084	6	1	11,25,740	12	0
1947–48	5,97,924	3	5	1,74,800	7	10	4,23,123	11	7
1948–49	8,52,310	13	2	1,71,479	4	8	6,80,831	8	6
1949–50	12,09,237	2	2	1,81,989	11	0	10,27,247	7	2
1950–51	12,40,411	14	0	1,74,475	11	9	10,65,936	2	3
1951–52	14,39,382	12	1	1,99,700	14	9	12,39,681	13	4
1952–53	12,62,809	6	0	2,21,095	3	2	10,41,714	2	10
1953–54	13,19,774	4	0	2,25,069	1	6	10,94,705	2	6
1954–55	11,63,993	3	7	2,53,738	3	9	9,10,254	15	10
1955–56	11,44,743	8	4	1,96,255	4	1	9,48,488	4	3
Total	1,45,55,857	10	3	26,04,609	5	8	1,19,51,248	4	7

CHAPTER VI—STATISTICS OF GROWTH AND YIELD.

144. *Sandal outturn.*—The following is a classified abstract of the trees extracted and outturn realised from the different felling series in the Reserve sandal working circle, during a period of twenty one years from 1932–33 to 1952–53. These figures were compiled from the felling series journal maintained for the Reserve Sandal Working Circle : Unfortunately, a similar record was not prescribed for the Village Sandal Working Circle.

The following statement is an abstract of the data from which the outturn average corresponding to each girth class was calculated ;—

Classified abstract of trees extracted and outturn realised from various localities in Coimbatore North Forest Division from 1932–33 to 1952–53.

Serial number and locality.	*Total number of trees extracted.*	*Percentage of Girth classes.*					
		Complete trees.	*In-complete trees.*	*Sapwood.*	*Below 6″*		
					Number of trees.	*Total weight in lb.*	*Average in lb.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 Kadahatty	38,151	29·1	..	70·9	928	2,398¼	2·58
2 Ullepalayam	61,089	39·8	..	60·2	1,952	3,575⅛	1·83
3 Yelanji	1,89,428	41·2	..	58·8	8,297	15,266-9/16	1·84
4 Kurumbur	37,358	71·6	..	28·4	3,567	5,742¾	1·61
5 Gundri	63,152	49·3	..	50·7	3,425	15,001·0	4·38
6 Hassanur	54,803	23·8	..	76·2	2,458	3,961½	1·61
7 Kottadai	47,093	53·4	..	46·6	7,174	12,231½	1·70
8 Talamalai	60,538	67·3	..	32·7	5,465	5,085·0	0·93
9 Naidalapuram ..	87,797	60·6	..	39·4	7,156	14,944·0	2·09
10 Chikkahalli	88,125	49·9	..	50·1	8,334	16,391½	1·97
11 Jeergahalli	1,27,282	48·0	..	52·0	12,931	9,844¾	0·76
12 Palamalai	6,538	84·7	0·2	15·1	1,399	4,704¾	3·36
13 Ondanai	37,452	72·5	0·005	29·495	3,881	15,546⅝	4·01
14 Halur	7,731	95·0	1·0	4·0	1,251	3.549·0	2·84
15 Manar	11,782	93·9	2·2	3·9	5,076	13.542¼	2·67
16 Plains Series	26,755	40·2	..	59·8	1,170	1,766¼	1·51

Serial number and locality.	*Girth classes—cont.*					
	6″ to 12″			*12″ to 18″*		
	Number of trees.	*Total weight in lb.*	*Average in lb.*	*Number of trees.*	*Total weight in lb.*	*Average in lb.*
	(9)	(10)	(11)	(12)	(13)	(14)
1 Kadahatty	7,051	44,238½	6·21	2,650	56,070¼	21·16
2 Ullepalayam	17,000	71,975¾	4·23	4,661	1,05,080·0	22·54
3 Yelanji	51,639	1,96,181-5/16	3·80	15,349	3,14,707-5/15	20·50
4 Kurumbur	16,562	1,00,894¼	6·09	5,525	1,40,982½	25·52
5 Gundri	19,223	1,26,119·0	6·56	6,689	1,83,713·0	27·46
6 Hassanur	7,709	26,317·0	3·41	2,437	31,193¼	12·80
7 Kottadai	15,337	60,541¼	3·95	2,128	4,51,150·0	21·22
8 Talamalai	27,286	1,56,608⅛	5·74	8,068	1,88,326½	23·34
9 Naidalapuram ..	32,456	1,87,224¼	5·73	9,520	2,47,904·0	26·04
10 Chikkahalli	29,530	1,56,944·0	5·31	5,347	1,29,217½	24·16
11 Jeergahalli	36,816	1,93,571⅛	5·26	7,405	1,77,742¾	24·00
12 Palamalai	2,887	16,001·0	5·54	861	12,726½	14·78
13 Ondanai	13,053	1,16,789¼	8·95	7,280	2,03,936¾	28·01
14 Halur	4,487	37,964¾	8·46	1,404	46,954¼	33·44
15 Manar	5,650	41,584¾	7·36	514	15,512¾	30·18
16 Plains Series	7,054	35,136½	4·98	2,149	47,709¾	22·20

Classified abstract of trees extracted and outturn realised from various localities in Coimbatore North Forest Division from 1932–33 to 1952–53—cont.

Serial number and locality.			*Girth Classes*—cont.					
			18″ to 24″			*24″ to 30″*		
			Number of trees.	*Total weight in lbs.*	*Average in lb.*	*Number of tress.*	*Total weight in lb.*	*Average in lb.*
			(15)	(16)	(17)	(18)	(19)	(20)
1 Kadahatty	..	..	358	27,136	75·8	91	16,700¼	183·52
2 Ullepalayam	..	..	603	42,427⅞	70·36	82	9,650⅛	117·68
3 Yelanji	..	..	2,227	1,56,116¼	70·10	359	50,489·0	140·64
4 Kurumbur	..	..	864	58,859¼	68·12	158	21,563⅞	136·48
5 Gundri	..	..	1,420	1,04,949½	73·91	296	37,402¼	126·35
6 Hassanur	..	..	365	16,962·0	46·47	56	6,217¾	111·03
7 Kottadai	..	..	369	19,037·¾	51·59	88	12,551·0	142·63
8 Talamalai	..	..	1,511	1,03,049⅝	68·20	298	46,396·0	155·69
9 Naidalapuram		..	1,564	12,6013½	80·57	242	39,775½	164·36
10 Chikkahalli		..	654	56,108½	85·79	105	18,788¾	178·94
11 Jeergahalli	..	..	992	70,702⅞	71·27	200	28,565¾	142·83
12 Palamalai	..	..	277	7,509·0	27·11	75	2,526¾	33·69
13 Ondanai	..	..	2,081	1,59,523·0	76·66	565	90,327¾	159·87
14 Halur ..	..	..	229	19,838½	86·63	41	7,570·0	184·63
15 Manar	..	..	61	4,609¼	75·56	10	640¾	64·08
16 Plains Series ..		..	272	16,318¼	59·99	23	3,403·0	147·83

Serial number and locality.			*Girth Classes*—cont.					
			30″ to 36″			*36″ and above.*		
			Number of trees.	*Total weight lb.*	*Average in lb.*	*Number of trees.*	*Total weight in lb.*	*Average in lb.*
			(21)	(22)	(23)	(24)	(25)	(26)
1 Kadahatty	..	..	14	3,364½	240·30	3	3,364⅛	572·5
2 Ullepalayam	..	..	17	5,353·0	314·88	2	585	292·5
3 Yelanji	..	..	72	15,685¼	217·85	22	8,404·0	382·0
4 Kurumbur	..	..	37	8,064·0	217·95·0	25	8,295¾	331·83
5 Gundri	..	..	74	16,492¾	222·88	17	5,107½	300·44
6 Hassanur	..	..	14	2,534¾	181·05	1	484¾	484·75
7 Kottadai	..	..	35	8,367·0	239·06	23	9,146⅓	397·67
8 Talamalai	..	..	56	13,238½	226·40	11	8,872¼	852·02
9 Naidalapuram		..	51	16,531¾	324·15	11	7,116¾	646·98
10 Chikkahalli	..	..	21	5,987¼	285·11	20	8,561⅓	428·08
11 Jeergahalli	..	..	45	9,791·0	217·58	13	5,216¾	401·29
12 Palamalai	..	..	31	1,480¾	47·77	21	939·0	44·71
13 Ondanai	..	..	163	41·083¾	252·05	134	51,481·0	884·19
14 Halur ..	..	..	11	2,316⅛	210·56	1	711¾	711·75
15 Manar	..	..	5	1,194·0	238·80	4	1,232	308·0
16 Plains Series ..		..	2	496·0	248·00	..	..	..

145. *Distribution percent of sandalwood classes in the depot.*—The following statement shows the distribution percent of the several sandalwood classes as marketed in the Sathyamangalam Sale Depot over a period of nine years :—

Distribution percent of sandalwood classes in Sathyamangalam Depot.

Serial number and name. (1)	1943–44. (2)	1944–45. (3)	1945–46. (4)	1946–47. (5)	1947–48. (6)	1948–49. (7)	1949–50. (8)	1950–51. (9)	1951–52. (10)
1 Brillets I, II and III classes.	15·88	14·71	13·09	13·16	13·92	11·28	14·39	9·45	12·93
2 Gholla	16·19	16·58	12·87	12·12	13·75	11·98	11·11	9·44	7·61
3 Ghatbadala	2·75	2·50	1·94	2·48	2·97	2·49	3·55	2·47	2·23
4 Bagaradad	5·03	5·99	4·98	5·97	6·95	11·11	6·48	5·23	4·78
5 Roots I, II and III classes.	9·36	9·76	11·39	9·17	9·66	15·61	8·51	9·03	7·38
6 Jajpoka I and II classes ..	12·52	12·81	15·63	18·38	19·92	15·17	21·44	21·58	18·81
7 Ainbagar	4·66	4·89	6·29	·15	7·95	6·34	7·63	8·48	8·22
8 Cheriah	6·51	6·74	5·75	12	6·20	5·31	4·76	5·28	4·59
9 Ainchillta	1·08	1·12	1·58	0·93	1·07	0·92	0·72	1·38	0·76
10 Chagrilva	0·45	0·48	0·54	0·49	0·51	0·45	0·31	0·46	0·45
11 Hatrichilta	0·01	0·01	0·01	0·01	0·02	0·03	0·0094	0·03	..
12 Milvachilta..	8·16	8·45	7·18	7·49	6·61	4·37	5·55	6·36	5·83
13 Basola Bukni	15·74	15·30	15·88	13·39	3·00	13·70	15·01	15·04	13·23
14 Saw dust	0·55	0·48	0·49	0·48	0·45	0·39	0·47	0·41	0·37

146. ***Dryage in final cleaned wood.***—The following statement has been compiled from the figures maintained in the Sathyamangalam Sale Depot during the period 1948–53 and shows the percentage of deficit of final cleaned wood in the various sandalwood classes :—

***Statement showing the percentage of deficit in final cleaned wood during storage in** double lock (Average period of four months).*

Years. (1)	***Ghatbadla.*** (2)	***Bagardad** VI.* (3)	***Roots** 1st class VII.* (4)	***Roots** 2nd class VIII.* (5)	***Roots** 3rd class IX.* (6)	*Jajpokal 1st class X.* (7)	*Jajpokal 2nd class XI.* (8)
1948–49 ..	**2·5**	2·27	5·4	4·37	3·0	3·17	3·01
1949–50 ..	**4·21**	2·07	7·38	4·56	4·48	3·64	3·07
1950–51 —	**2·67**	1·83	1·02	4·33	2·83	3·36	1·38
1951–52 —	**3·00**	**2·10**	6·9	4·6	2·6	3·3	2·00
1952–53 ..	2·57	1·51	5·75	3·84	2·45	2·71	1·32

Years.	***Ainbagar** XII.* (9)	***Cheria** XIII.* (10)	***Ainchilta** XIV.* (11)	***Hatrichitta** XV.* (12)	***Milvachilta** XVI.* (13)	***Basola-bukini** XVII.* (14)	*Saw dust XVIII.* (15)
1948–49 —	**2·05**	1·47	1·4	—	1·6	0·8	..
1949–50 —	**2·17**	**2·59**	—	—	1·68	1·78	2·00
1950–51 —	**1·80**	**1·30**	**1·40**	—	0·6	0·38	..
1951–52 —	**1·60**	**0·04**	**2·7**	—	1·5	0·7	0·6
1952–53 —	**0·08**	**0·05**	**0·02**	—	0·24	0·70	0·21

147. *Deficit in rough cleaned wood.*—The following statement shows the deficit in rough cleaned wood during storage, transport and conversion. It is compiled from the Sandalwood Registers in the District Forest Office.

Statement showing the percentage of deficit in rough cleaned sandalwood during storage, transit and conversion.

Particulars.	*Percentages.*				
	1948–49.	1951–52.	1952–53.	1953–54.	1954–55.
(1)	(2)	(3)	(4)	(5)	(6)
1 Deficit in storage of rough cleaned wood in forest and in transit to sale depot.	3·419	1·673	1·675	3·661	2·627
2 Deficit in storage of rough cleaned wood in Satyamangalam Sale Depot in final cleaning (dryage).	1·252	2·051	2·524	2·526	4·148
3 Percentage of sapwood after conversion.	0·132	0·093	0·122	0·785	0·898
4 Deficit in storage under single lock before removal to double lock.	0·818	1·603	1·220	1·295	2·999

148. *Sandal mortality.*—In this Working Plan for North Coimbatore Division (1934), Sri C. R Ranganathan had enunciated a natural law governing the mortality of sandal, based on his enumerations. In practice it was found out that no such natural law existed. A re-enumeration of sandalwood trees was done at the time of the preparation of this Working Plan. The figures were sent to the Statistician, Forest Research Institute whose report on the subject is reproduced below :—

" The hypothesis enunciated by Sri C. R. Ranganathan, in paragraph 415 of his Working Plan (1934) for the North Coimbatore Forest Division, Madras (relating to mortality of sandalwood) was based on the data given in paragraph 414 of this Working Plan and it could be restated as follows :—

That the percentages of dead, spiked and healthy trees are uniformly the same in all the girth classes.

" Chi-square " tests of significance were performed to see whether the data of paragraph 414 bear out the above hypothesis, and it was found that the probability of this hypothesis being true is negligibly small (*see* Table I attached). In other words, the evidence, contained in paragraph 414 was in conflict with the deduction made therefrom in paragraph 415.

Similar study was also made on the data of Table II sent in Working Plan Officer's letter No. 4085/55-T, dated 6th July 1955 and the findings again were essentially the same, namely, that the percentage of dead, spiked and healthy trees could not be considered the same in all the girth classes (*see* Table II attached). In fact, the mortality percentage figures for the first two girth classes, namely, 6 inches to 12 inches and 12 inches to 18 inches were found in general to be significantly larger than the mortality percentages of the higher girth classes both in Tables I and II.

Now we shall turn our attention to Tables I, II and III sent in Working Plan Officer's letter No. 4085-55-T, dated 6th July 1955. Table II gives the number of dead, spiked and healthy trees by girth classes but does not give the time interval during which these deaths have occurred and as such it is not possible to calculate the annual mortality percentage. However, presuming that this time interval is the same for all the girth classes it is significant to note that the trend of mortality figures given in Table II (against girth classes) is very much different from the trend presented by the so-called annual mortality percentages given in Table I, which were calculated on the basis of the following formula :—

Annual mortality percentage in I the Girth classes.

$$\frac{n\ i - n\ i\ (\text{plus})\ 1}{16\ n\ i} \times 100$$

Where n i ; No. of living trees in i th girth class
n i (plus) 1 ; (1 plus)th girth class,
and 16 is the period of transition in years.

149. Thus it appears that annual mortality percentages calculated for the various girth classes by these two methods will give two sets of figures which would differ appreciably from one another. In other words the indirect method of estimating mortality percentage on the basis of difference of living population in successive girth classes by the formula stated above is not reliable.

Data from paragraph 414 of the Working Plan for the North Coimbatore Forest Division, Madras by Sri C. R. Ranganathan (1934).

TABLE I—*Number and percentage of healthy, dead and spiked trees in each girth class.*

Girth classes.

Condition of tree.	6″–12″		12″–18″		18″–24″	
	Number of trees.	*Per cent.*	*Number of trees.*	*Per cent.*	*Number of trees.*	*Per cent.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Satyamangalam—						
Healthy	84,563	85·25	27,714	90·65	7,547	93·53
Dead	13,576	13·69	2,670	8·73	490	6·07
Spiked	1,050	1·06	190	0·62	32	0·40
Total ..	99,189	100	30,574	100	8,069	100

Girth classes.

Condition of tree.	24″–30″		30″–36″		36″–42″	
	Number of trees.	*Per cent.*	*Number of trees.*	*Per cent.*	*Number of trees.*	*Per cent.*
	(8)	(9)	(10)	(11)	(12)	(13)
Satyamangalam—						
Healthy	1,384	94·60	347	95·86	69	94·52
Dead	70	4·78	13	3·59	4	5·48
Spiked	9	0·62	2	0·55	..	..
Total ..	1,463	100	362	100	73	100

Girth classes.

Condition of tree.	42″–48″		48″–54″		54″–60″		
	Number of trees.	*Per cent.*	*Number of trees.*	*Per cent.*	*Number of trees.*	*Per cent.*	*Value of Chi. Square.*
	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Satyamangalam—							
Healthy	9	100·00	1	100·00	2	100·00	1,049·682 (df.=8).
Dead	..	..	..	..	..	..	
Spiked	..	..	..	..	..	..	
Total ..	9	100	1	100	2	100	

Data from paragraph 414 of the Working Plan for the North Coimbatore Forest Division, Madras by Sri C. R. Ranganathan (1934).

TABLE I—*Number and percentage of healthy, dead and spiked trees in each girth class—cont.*

Condition of tree.	*Girth classes.*					
	6''–12''		12''–18''		17''–24''	
	Number of trees.	*Per cent.*	*Number of trees.*	*Per cent.*	*Number of trees.*	*Per cent.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Talamalai—						
Healthy	51,969	91·50	11,522	91·60	2,975	93·44
Dead	4,120	7·25	870	6·92	150	4·71
Spiked	707	3·25	187	1·48	59	1·85
Total ..	56,996	100	12,579	100	3,184	100

Note.—Df = Degree of freedom.

Condition of tree.	*Girth classes.*					
	24''–30''		33''–36''		36''–42''	
	Number of trees.	*Per cent.*	*Number of trees.*	*Per cent.*	*Number of trees.*	*Per cent.*
	(8)	(9)	(10)	(11)	(12)	(13)
Talamalai—						
Healthy	679	96·31	190	96·45	42	93·33
Dead	19	2·70	3	1·52	2	4·44
Spiked	7	0·89	4	2·03	1	2·23
Total ..	705	100	197	100	45	100

Condition of tree.	*Girth classes.*						*Value of Chi. Square.*
	42''–48''		48''–54''		54''–60''		
	Number of trees.	*Per cent.*	*Number of trees.*	*Per cent.*	*Number of trees.*	*Per cent.*	
	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Talamalai—							
Healthy	7	100	2	100	1	100	73·5777 (df. = 8).
Dead	..	..	..	..	..	..	
Spiked	..	..	..	..	..	..	
Total ..	7	100	2	100	1	100	

Data from Table II enclosed with letter No. 4085-55T, dated 6th July 1955 from Working Plan Office.

TABLE 2—*Number and percentages of healthy, dead and spiked trees in each girth class.*

Condition of tree.	*Girth classes.*					
	6''–12''		12''–18''		18''–24''	
	Number of trees.	*Per cent.*	*Number of trees.*	*Per cent.*	*Number of trees.*	*Per cent.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Satyamangalam—						
Healthy	22,276	75·34	14·107	83·00	5,154	88·04
Dead	6,261	21·17	2,492	14·66	514	8·78
Spiked	1,032	3·49	398	2·34	186	3·18
Total ..	29,569	100	16,997	100	5,854	100

Data from Table II enclosed with letter No. 4085-55T, dated 6th July 1955 from Working Plan Office—cont.

TABLE 2—*Number and percentages of healthy, dead and spiked trees in each girth class*—cont.

Condition of tree.	*Girth classes.*					
	24″–30″		30″36″.		36″–42″	
	Number of trees. (8)	*Per cent.* (9)	*Number of trees.* (10)	*Per cent.* (11)	*Number of trees.* (12)	*Per cent.* (13)
Satyamangalam—						
Healthy	1,390	87·42	420	86·96	106	84·13
Dead	145	9·12	48	9·94	12	9·52
Spiked	55	3·46	15	3·10	8	6·35
Total ..	1,590	100	483	100	126	100

Condition of tree.	*Girth classes.*				
	42″–48″		48″–54″		
	Number of trees. (14)	*Per cent.* (15)	*Number of trees.* (16)	*Per cent.* (17)	*Value of Chi. Square.* (18)
Satyamangalam—					
Healthy	36	94·74	1	100·00	**877·679 (df.=12).**
Dead	2	5·26	..	..	
Spiked	..	..	..	..	
Total ..	38	100	1	100	

Condition of tree.	*Girth classes.*					
	6″–12″		12″–18″		18″–24″	
(1)	*Number of trees.* (2)	*Per cent.* (3)	*Number of trees.* (4)	*Per cent.* (5)	*Number of trees.* (6)	*Per cent.* (7)
Talamalai—						
Healthy	26,695	78·88	7,133	80·63	2,135	89·93
Dead	6,444	19·04	1,588	17·95	211	8·89
Spiked	704	2·08	126	1·42	28	1·18
Total ..	33,843	100	8,847	100	2,374	100

Condition of tree.	*Girth Classes.*					
	24″–30″		30″–36″		36″–42″	
	Number of trees. (8)	*Per cent.* (9)	*Number of trees.* (10)	*Per cent.* (11)	*Number of trees.* (12)	*Per cent.* (13)
Talamalai—						
Healthy	606	88·86	187	93·03	71	88·75
Dead	54	7·92	12	5·97	3	3·75
Spiked	22	3·22	2	1·00	6	7·50
Total ..	682	100	201	100	80	100

Data from Table II enclosed with letter No. 4085-55T, dated 6th July 1955 from Working Plan Office—cont.

TABLE 2—*Number and percentages of Healthy, Dated and spiked trees in each girth class*—cont.

Condition of tree.	*Girth classes.* 42″–48″ *Number of trees.* (14)	42″–48″ *Per cent.* (15)	48″–54″ *Number of trees.* (16)	48″–54″ *Per cent.* (17)	*Value of Chi. Square.* (18)
Talamalai—					
Healthy	43	78·18	6	100·00	268·080 (df10).
Dead	12	21·82	..	..	
Spiked	..	..	..	..	
Total ..	55	100	6	100	

PART II.

CHAPTER I—FUTURE MANAGEMENT DISCUSSED AND PRESCRIBED—BASIS OF PROPOSALS.

SECTION 1—THE NATIONAL FOREST POLICY OF INDIA.

150. The National Forest Policy of India was enunciated by the Government of India in 1952 in modification of the declaration of Forest Policy in 1894 and was formulated on the basis of six paramount needs of the country, namely :—

(1) the need for evolving a system of balanced and complementary land use, under which each type of land is allotted to that form of use under which it would produce most and deteriorate least; and

(2) the need for checking :

(*a*) denudation in mountainous regions, on which depends the perennial water-supply of the river systems whose basins constitute the fertile core of the country;

(*b*) the erosion progressing apace along the treeless banks of the great rivers leading to ravine formation and on vast stretches of undulating waste lands depriving the adjoining fields of their fertility;

(*c*) the invasion of sea sands on coastal tracts, and the shifting sand dunes, more particularly in the Rajaputana Desert;

(3) the need for establishing tree lands wherever possible, for the amelioration of physical and climatic conditions promoting the general well-being of the people;

(4) the need for ensuring progressively increasing supplies of grazing small wood for agricultural implements, and in particular of firewood to release the cattle dung for manure to step up food production;

(5) the need for sustained supply of timber and other forest products required for defence, communications and industry; and

(6) the need for the realisation of the maximum annual revenue in perpetuity consistent with the fulfilment of the needs enumerated above.

These vital needs indicate the functions, forests are to fulfil and provide the fundamental basis of the Policy governing their future.

(From the " National Forest Policy of India "—Part III, Published by the Ministry of Food and Agriculture.)

SECTION 2—GENERAL OBJECTS OF MANAGEMENT.

151. The Working Plan deals with the whole of the Coimbatore North Forest Division as constituted on 1st April 1955. Locality factors of diverse nature find expression in these forests extending over 800 square miles and many of the vital national needs setforth above are present in some measure. Accordingly, the specific objects of management, of these forests are as follows :—

(1) To exploit the resources of the forests in respect of sandal, bamboo, firewood and minor forest products, with due regard to silvicultural principles;

(2) to augment these resources speedily, especially in respect of firewood and minor forest products, through artificial means, making the utmost use of local facilities for irrigation by reclothing the denuded panchayat forests and elsewhere, by enriching the growing stock in quantity and quality;

(3) to meet legitimate local demands for particular items of forest products; and

(4) to ensure the realisation of the maximum sustained financial return from the forests of the division.

SECTION 3—METHODS OF TREATMENT.

152. *Exploitation.*—The Natural Selection System will continue to apply to all sandal areas, in forests and village lands; resort to removal of green trees will be permissible only in patta lands in certain specified circumstances. The exploitation of the fuel forest under the simple coppice system (with a changed lay out of coupes in many cases) and of bamboo areas under the bamboo selection system will continue. A fresh effort will be made to meet the small timber needs of the plateau and the foot hill villages. Faggot wood for the Shanars, the extraction of minor forest products and the regulation of grazing, penning and improvement of watering facilities will be provided for. The irrigated teak plantations in Hullikaldrug will be devoted to production of electric transmission poles and ordinary poles.

153. *Regeneration—New projects.*—Making use of the exceptional facilities for irrigation that exist in some forests in Mettupalayam Range, it is proposed to embark on a scheme of large-scale planting of Teak and other timber species. Extensive planting along the fringes of the Bhavanisagar is also proposed. Besides, the reclothing of the isolated Panchayat Forests with minor forest product, fodder and manure leaf species is also provided for.

SECTION 4—WORKING CIRCLES AND THEIR CONSTITUTION.

154. In pursuance of the objects of management, nine Working Circles are constituted. The following statement shows the distribution of the Working Circles :—

Statement showing the Distribution of Working Circles.

Working Circle.	*Distribution.*				
Serial number and name.	*Extent in acres.*	*Ranges.*	*Reserves.*	*Number of felling series in the Working Circle.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
1 Reserve Sandal Working Circle.	202,944	All four	Guthialathur, Bavebetta, Ullepalayam, Talamalai, Akkujorai and Akkujorai Extension, South Bargur, Ennamangalam, Palamalai, Nilgiris, Eastern slopes, Jakkanare, Hullikaldrug, Melur slopes, Nellithorai and Sundampatti.	Fifteen (15) ..	For extraction of Sandalwood.
2 Village Sandal Working Circle.	95,024·04	Do.	Nil.	Fourteen (14) ..	Do.
3 Fuel Working Circle ..	42,118·50	Do.	Guthialathur and Extension, Talamalai and Extension, South Bargur, Ennamangalam, Jakkanare slopes, Nellithorai Block 7, Kandiyur Block 6, Tadagam Block 4, Chennimalai, Villikaradu, Modur, Pethikuttai Reserved Forest.	Twenty-two (22).	For supply of fuel and small timber to public.
4 Shanar Pollard Working Circle.	3,345	Bhavani	Ennamangalam	Two (2)	For supply of branch wood fuel to the Shanars.
5 Bamboo Working Circle ..	193,618	All four	Guthialathur, Bavebetta, Ullepalayam, Talamalai, South Bargur, Nilgiris, Eastern slopes, Jakkanare slopes, Kallar, Hullikaldrug, Pilur, Melur.	..	For supply of bamboo to public.
6 Small Timber Working Circle.	58,128	Sathyamangalam and Talamalai.	Guthialathur, Bavabetta, Ullepalayam and Talamalai.	Twenty-one (21).	For supply of agricultural implements to the hill villages.
7 Grazing Working Circle ..	..	All four	All the reserves in the four ranges, excluding the areas which are specifically closed to grazing.	..	For grazing.
8 Minor Forest Produce Working Circle.	..	Do.	All the reserves in four Ranges.	..	For collection of minor forest product.
9 Teak Pole Working Circle ..	..	Mettupalayam ..	Hullikaldrug	..	For production of Teak Poles.
10 Rehabilitation Working Circle.	..	Talamalai, Bhavani and Mettupalayam.	Vellikaradu, Kongarupalayam, Voipadi, Arachalur, Modur, Pettikuttai, Nellimalai.	..	For rehabilitation of such of the former Panchayat forests as need Concentrated Regeneration.
11 Irrigated Teak Plantation Working Circle.	4,850·00 (Approximate)	Do.	Odanthorai	..	..

SECTION 5—PERIOD OF THE WORKING PLAN.

155. This Working Plan will be in force for fifteen years from 1st April 1956.

CHAPTER II—WORKING PLAN FOR THE RESERVE SANDAL WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE AND CHARACTER OF VEGETATION.

156. *Constitution and area.*—The Reserve Sandal Working Circle includes **all** the sandal areas in the Reserved Forests of the division. Of a total area of 202,944 acres, this Working Circle consists of an effective sandal aera of about 90,000 acres (basing on a 1932 estimate) and of non-sandal area, included on account of the patchy distribution of sandal and the need for adopting natural features as boundaries.

157. *Division in to felling series.*—The Working Circle is divided into fifteen felling series and the boundary description is furnished below :—

STATEMENT SHOWING THE PARTICULARS OF RESERVE SANDAL FELLING SERIES.

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area. in acres.* (3)	*Boundaries.* (4)
	Sathyamangalam Range.		
1 Guthialathur	Kadahalli	15,431	North by the Range boundary ; east by Talayuthu-Ganganur footpath ; line joining Gundippe, Doddabeneri Betta Kadahatti enclosure line, Gundumaduvan Halla ; south by line joining Kollegal Road, 3,900 Jadayamadeswarankoil, 4,230 Basuveswaran Koil and on to Bensimalai, thence along Varathi Halla to 2810, 2620, 2530, 3068, 2710 and Gundumaduvan Halla, west by Kollegal Road and Gezmalain enclosure line.
2 Guthialathur and Ullepalayam.	Ullepalayam	8,536	North by the southern boundary of the Kadahatti felling series; east by Dastanayakanur-Bedarpalayam footpath, south by Nellikadupallam and Arekadavan Halla ; west by Odanmantai Keranai footpath and Doddahalla.
3 Guthialathur, Ullepalayam and Barebetta.	Yelanchi	16,123	North by Nellikadu Pallam ; east by Guthialathur enclosure line ; south by Reserve line joining Valemadugu Pallam, Athiyur footpath, 3716, 5564, 5179 5150, 4995 and Betmund Halla and stream let by Betmund Halla, 3720 ridge to stream let and Barabetta Reserve.
4 Guthialathur	Kurumbur	10,554	North by line joining Bensimalai Varathimalai, 2810, 2620, 2530, 3068 Gundumaduvan Halla and Namakkal Betta ; east by Arigam enclosure line and stream ; south by Guthialathur enclosure line and west by Dasanayakanur-Kadahatti footpath.
5 Guthialathur	Gundri	20,702	North by line joining 3116, 2460, 2300 Makkanpalayam enclosure line, the line, Geligenbetta ridge 2687, the ridge to Arigiamgundri footpath, the footpath, line joining it with Bellanathur Halla through 2850, the halla and Pal Ar ; east by Pal Ar. and sits tributory and footpath from Kanakampalayam to Aniganatham ; south by line joining Aniganatham-Kanakampalayam footpath, Koza-

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area in acres.* (3)	*Boundaries.* (4)
	Sathyamangalam Range—cont.		
5. Guthialathur—*cont.*	Gundri—*cont.*		naikuttai ridge Gundrikavalur footpath, 3300, 2280, 4498, 3820, 4837, footpath to Palayur, footpath 4547, 4461 Malliammadurgam enclosure line and the line and west by line joining 4892, 4797, streamlet to Pumalaipallam, the Pallam and Valemadugupallam to Guthialathur enclosure line, the line, stream entering Haluru halla, the Halla, Arigam enclosure line and line joining Methakkal Guddai with 3116.
6 Guthialathur and Talamalai.	Hassanur	6,520	North by line joining Kollegal Road, Hassanur-Attikan Estate footpath, Hanur betta, 4708 and the Hassanuri Ghat Road where Uthumaduvan Halla; crosses it, east by line joining Nisami Betta, Kanagiripallam 3981, Tenavaraipallam 4158 and Kollegal Road; south by line joining Hassanur Ghat Road and Nisami Betta (passing towards the north of 3740) and west by line from Hassanur Ghat Road and on through 3424, 3510, 3720, Kollar Betta to the Hassanur Ghat Road where the Uthumaduvan Halla crosses it.
7 Guthialathur	Kotadai	8,197	North by line joining Kansini Betta with Kollegal Road and Geddesal, Yekkathur footpath; east by line joining Geddasal Yekkathur footpath to the ridge (to the west of Amaigundi) and to the Betmund Halla; and then the Halla itself; south by line joining Dimbum-Osakkatti Road, Kulaichakaram temple, 3991, 3928, 4049 and on to the Betmund Halla and west by streamlet to Kanagiri pallam and line therefrom through 3981, Tenavaraipallam the saddle to the east of 4158 to the Geddasal Road, the road and line joining 45th mile of Geddasal Road, 4891, 5311 to Kansiribetta.
	Talamalai Range.		
8 Talamalai	Talamalai	16,081	North by Naidalapuram-Tignari footpath, Naidalapuram enclosure line and Kodamballi Halla; east by line joining Kodamballi Halla 3888, 4353, 4054, 4663, 3840, 3700 to Dimbam Talamalai Road, thence a line to a point near Gali Dimbam footpath west of 3880; South from a point by a line through 3204, 3230, Marimmangudi, 2880, 2729, up to 2780 and West from 2780 by a line to Elehalla, then the Halla, a line to 2770, a point near 2880, a line to Jiragahalli-Talamalai footpath, then a stream to 3240, and line through 3263, 3453 to meet Naidalapuram Tignari footpath.
			North by 4107, Streamlet to Oduzkuttai Halla; east by 4177 (Surali Kannubetta) 4142, 4098, 4208, 4156 (Mesapurai) 4090 ridge and a line to a point near 4020 on the footpath from Gadidimbam to Mavanattam up to 3rd mile on the Dimbam Talamalai Road, then road to the Streamlet near 3rd furlong, then streamlet; south by a line joining 4177, 3750 and then stream as far as 3810 and West by a line joining 3810, Mariammankoil (on Kinnarimandai-Gaidimbam footpath) 4070 (Baraindu) 4107.

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area in acres.* (3)	*Boundaries.* (4)
	Thalamalai Range—cont.		
9 Talamalai	Niaidalapuram	9,306	North by Chikahalli, Malkuttipuram footpath, Chikahalli enclosure line and Chikahalli Hassanur footpath; east by line through 3929 ridge to Kodambalihalla; south by Kodambalihalla and Nidalapuram enclosure line and west by Naidalapuram Tiganari footpath and Talamalai Reserved Forest boundary.
10 Talamalai	Chikkahalli	9,560	North by the Reserved boundary; east by the Reserve boundary and line joining 3699, 4246, and south by Chikkahalli-Hassanur footpath, Chikkahalli-Hasanur footpath, Chikkahalli enclosure line and Chikkahallli Malkuttipuram footpath and west by the Reserve boundary.
11 Talamalai and Akkurujurai and extension.	Jiragahalli	22,375	Akkurjorai Reserved Forest, and Extension Reserve Forest area within. North by northern boundary of Talamalai Reserved Forest; east by western boundary of the Neidalapuram and Talamalai felling series; south by a line from Bomanankuttai footpath through 3636 Jeragahalli Betta; Jaldooddu, 2960 and 3176 to meet the Range boundary near Arakaldevargudi and west by the Range boundary; North by a line from near the junction of Masinigudi-Mungalhatti footpath with Moyar across 2554 (Sundakai-gumma) 2619, 2880, 2796, and 2694 to meet Belathur footpath, then the above footpath till it joins with Moyar and south by Moyar river.
	Bhavani Range.		
12 South Bargur	Ondanai	8,007	North by the Range boundary; east by line joining Anaipodu, Machapatti and streamlet; south by line passing through 4393, 4410, 3223, Valukuparaipallam 3448 and west by stream.
	Mettupalayam Range.		
13 Nilgiris eastern slopes, constantia, sandalwood 1 and 2 Jakanare slopes.	Halur	14,642	Nilgiris eastern slopes Forests, a portion; Jakkanare slopes Reserved Forests; Sandalwood Reserved Forest 1 and 2; Constantia Reserved Forest.
14 Kallar Hullikal drug, Nelithorai, Block VII, Melur slopes Kandiyur Block VI and Gopinari Block V.	Manar	18,219	Kallar Reserved Forest, a portion of Hullikal drug Reserved Forest, Kandiyur (Sandalwood) island and area within and the area newly added as described below: North by Bhavani river; east by stream starting from 2666 to the south of usimalai which joins Manthorai Pallam, north of Manthorai village and thence along the Reserve Forest line till it meets Ansur-Koravankandi footpath.; south by Ansur-Koravankandi footpath till it meets Bhavani river and west by Puchimaruthur Perumalkoil footpath.

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area in acres.* (3)	*Boundaries.* (4)
	Sathyamangalam, Talamalai and Bhavani Ranges.		
15 South Bargur and Ennamayalam Guthialathur and Guthialathur Extension.	Plains Sandal ..	18,691	North by Northern boundary of Ennamangalam Reserved Forest line joining Chinna Valukuparai Pallam, Makkalkaradu, 2779 and on to Mathurmathur footpath ; east by Andipattiyur; Pallam south by Sourth Burgur Reserved forest boundary and west by Bhavani Kollegal Road.
Talamalai and Guthialathur Extension.	..	..	North by line passing through Sholagal Thittu, Olakaparai Thittu Angaraoddu Vengayapatti Mari, Chinnarayan Boli and on to Emmathur Kombail; east by line joining Emmathur Kombai and Pallimalai jumma and thence the streamlet ; south by Gutialathur Reserved Forest boundary and Hassanur Ghat Road; and west by Hassanur Ghat Road.
			North by Hassanur Ghat Road ; east by Gutialathur Extension Reserved Forest boundary ; south by line joining Ganganaikanpallam with the Reserved Forest boundary ; and west by Bennari-Kothamangalam Road.
			North by line joining Massanaigudi with Gajalattipath and Talamalai Doddakombai-Prikkadavu footpath ; east by Budikuppahalla ; and west by Moyar.

158. *Character of vegetation.*—The character of the vegetation in this Working Circle is described in Chapter II of Part I.

SECTION 2—ANALYSIS AND VALUATION OF THE CROP.

159. It was not considered worthwhile to take up a fresh analysis and valuation of the sandal forests of the division and the stock maps prepared with the First Working Plan were used in this plan also. According to the first plan, the growing stock which then existed was expected to yield about 2,519 tons of final cleaned heartwood of sandal and this at Rs. 1,200 per ton meant Rs. 30,22,800. In arriving at this figure, the following assumptions were made :—

(1) that the dispersion into the various girth classes of sandal trees growing in reserves corresponded to that obtaining in the unreserves. This had to be made since only trees estimated to be over six feet in height were counted and not even measured;

(2) that the out-turn figures of dead sandal trees also applied to green sandal trees; and

(3) that the three inches to six inches girth class represented 61 per cent of the total growing stock.

It may be of interest to note that the actual total yield of rough cleaned wood from the forests of the division over a period of 21 years from 1932–33 to 1952–53 is 2,394 tons (approximately).

SECTION 3—METHOD OF TREATMENT.

160. *Silvicultural system.*—Natural selection system will be the silvicultural system. According to this only dead trees will be extracted; in addition natural regeneration will be tended and artificial regeneration practised where necessary.

161. *Felling cycle.*—The current felling cycle of six years will continue.

162. *Division into coupes.*—The present division of each felling series into six coupes has been retained intact. Though the first plan aimed at equiproductive coupes, wide variations have actually occurred in the out-turn from these coupes in each series. Hence there is no assurance that the yield will be uniform in future.

163. *Calculation of the possibility.*—In the First Working Plan, a detailed analysis of the figures of complete enumeration over the unreserves of Talamalai and Satyamangalam Ranges is set forth. It was claimed that the annual mortality percentage of sandal in the various girth classes presented a striking uniformity and that the phenomenon conformed to a natural law, viz., "Under normal conditions, the number of sandal trees which die in any girth class is a fixed proportion of the strength of that class and this, proportion is uniform in all classes". The annual mortality percentage was calculated to be 4.9 per cent and on this basis, the possibility was fixed at 127 tons 4 cwts. 1 qr. and 21 lb. of rough cleaned wood. It was expected that the yield would be normal from the second cycle onwards. The actual out-turn during the last 23 years has belied these very definite assumptions and has varied between very wide limits indeed, viz., about 27·7 tons in 1949–50 to 219·9 tons in 1942–43. In the face of such fluctuations, it is not possible to fix any possibility.

164. The opinion of the Statistician was sought on the question whether the information available up-to-date warranted the conclusion. He has given a decisive opinion that neither the data available in 1932 nor the much more detailed information since collected (and furnished to him) would support the conclusion and that the probability of the hypothesis being true is negligibly small. He states also that the indirect method of estimating mortality percentage on the basis of living population in successive classes by the formula adopted in paragraph 420 of the First Working Plan is not reliable.

165. In view therefore of the short-comings in the theoretical basis as well as the practical applicability of the hypothesis, it has to be concluded that the mortality of sandal is not a phenomenon that admits of any statistical assessment.

166. However, some forecast of annual yield (even if it be little better than a guess) is necessary and an outturn of 100 tons of rough cleaned wood is therefore adopted.

SECTION 4—METHOD OF EXECUTING THE FELLINGS.

167. *Regulation of working.*—The working will be regulated by area. One coupe will be worked each year in each series.

168. *Emergency regulation.*—The territorial conservator may reduce the felling cycle in any felling series to three years if he is satisfied that the felling series is heavily spiked and that dead trees should be extracted quickly to avoid their loss by fire or other causes.

169. *Agency of felling.*—All operations connected with the exploitation of sandal should be carried out departmentally.

170. *Felling rules.*—The coupe of the year should be gone over thoroughly and removal of all dead trees (including sapwood trees) carried out. There is scope for improvement in the planning and execution of timely and exhaustive extraction; classification and disposal, but the District Forest Officer must be satisfied that the time table is strictly adhered to and what is more that the whole coupe has been gone over and all dead sandal trees extracted.

171. *Annual programme of operations.*—The calender of detailed operations set forth in pages 257–259 of the first working plan is not generally observed as closely as it ought to be. Extraction is rarely completed by December and often goes on till the end of March. From every aspect, this is unsatisfactory. For one thing, labour is scarce in the hills from January to March, which are the harvest months. The Foresters are constrained to spend a good deal of their time in procuring mazdoors. Besides, the Foresters have other sanctioned works to execute. Moreover, a rush of consignments of rough cleaned wood into Satyamangalam depot during January to March dislocates final cleaning work and affects its quality. It is very necessary that the time schedule should be kept up and hasty execution of work avoided at all stages of sandalwood operations. It is also essential that Foresters in charge of extraction should give their undivided attention to complete this work by the end of December.

172. *Supply of implements to mazdoors.*—The progress of extraction work is often handicapped by the mazdoors not owning suitable and efficient implements. Availability of good implements will ease the labour problem materially. Though the work is executed on contract, it is worthwhile considering the supply of efficient pick-axes, hand-saws and adzes to the Foresters for supply to mazdoors.

SECTION 5—TABULAR STATEMENT OF FELLINGS.

173. The following statement shows the coupes to be worked in successive years in each felling series :—

Serial number and name of felling series. (1)	*Coupe No.* (2)	*Total area.* (3)	*Boundaries.* (4)
		ACS.	
		Sathyamangalam Range.	
1. Kadahatti	I	5,483	North by the Range boundary ; east by Talayuthu, Ganganur footpath ; south by Germalam enclosure line and west by Kollegal road.
	II	3,466	North by Germalam enclosure line and footpath ; east by line joining Gundippa 3,912, Doddamalai and streamlet ; south by southern boundary of felling series and west by Kollegal road.
	III	2,314	North by line joining 3912 with Kadahatti enclosure line ; east by Kadahatti enclosure line and footpath to Kadagoundanahalli ; south by southern boundary of the felling series and west by boundary of Coupe II.
	IV	955	North by Kadahatti enclosure line ; east by Dedarpalayam-Diggarai footpath ; south by southern boundary of the felling series and west by Kadhatti-Kadagoundanahalli footpath.
	V	1,342	North by Nallimaduvin Halla ; east by line joining Diggarai enclosure line, 2,810 and stream Nallimaduvin halla ; south by Bedarpalayam-Diggari footpath and west any Kadahalli enclosure line.
	VI	1,871	North by Kadahatti enclosure line ; east by Gudumaduvin Halla ; south by southern boundary of the felling series and west by Nallimaduvin Halla.
2. Ullepalayam	I	3,511	North by southern boundary of the Kadahatti felling series ; east by Cobbai pallam and line joining 3110, 3908, 4319, 4130, Kunganakallu and Basuvenswarankoil ; south by Nellikadupalayam and west by Odamandai Karanai foot path to Doddahalla and the Halla.
	II	770	North and east by Ullepalayam enclosure line ; south by Ullepalayam-Kothihalla footpath and west by Kobbaipallam.
	III	749	North by Ullepalayam enclosure line ; east by Karliakandagoundanahalla footpath ; south by Nellikadu pallam and west by Ullepalayam-Nellikadu pallam footpath.
	IV	818	North by Mondipalayamhalla ; east by Yekkathur enclosure line ; south by Arekadavan halla and west by Karlia-Kadagoundanahalla foot path and Ullepalayam enclosure line.
	V	1,446	North by southern boundary of the Kadahatti felling series ; east by Dasanayakanur-Bedarpalayam footpath ; south and west by Mondipalayam Halla.
	VI	1,462	North by southern boundary of the Kadahatt felling series ; east by Mondipalayam halla ; south by Ullepalayam enclosure line and west line joining 3110, 3908, 4319, Kungankallu and Basuvenswarankoil.

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area.* (3)	*Boundaries.* (4)
		ACS.	
	Sathyamangalam Range—cont.		
3. Yelanchi	I	1,448	North, east and west by north-west by north-west portion of the Barabetta Reserved Forest with Yelanchi Bilumugai footpath as the southern boundary.
	II	628	North, south and west by south-west portion of the Barabetta Reserved Forest with Totaihalla as the eastern boundary.
	III-A	3,407	North, east, south and west by south-east portion of the Barabetta Reserved Forest.
	III-B	1,785	North by Guthialathur enclosure line; east by Valemadagu Pallam, south by Guthialathur Reserved Forest line footpath to Athiyur 5564, 5179, 5150 ridge to Asagithimadavupallam; west by Asagithimadavu pallam.
	IV	4,552	North by Betmund Halla and Karlia-Ugumium footpath; east by Guthialathur enclosure line and Asagithimadavupallam; south by southern boundary of the felling series; west by the western boundary of the felling series.
	V	2,152	North by Karlia-Odamandai footpath; east by Guthialathur Reserved Forest boundary; south and West by Betmund Halla and Karilia-Ugimium footpath.
	VI	2,151	North by Nellikudaupallam and line joining with it with Betmund halla, east by Guthialathur reserved Forest boundary, south by Karlia-Odamandai footpath; west by Betmund halla.
4. Kurumbur	I	830	North by Habru Halla; east by Irritipallam-Marur-Anaikera footpath; south and west by Guthialathur-enclosure line.
	II	598	North by Habru halla; east by Salahatti-Mosalamadavu footpath; south by Guthialathur enclosure line; west by eastern boundary of coupe I.
	III	1,801	North by Habru Halla and Kurumber enclosure line; east by stream; south by Guthialathur enclosure line; west by Salathatti Mosalamadavu footpath.
	IV	3,351	North by line joining Bensi and Namakkal bettas, east by Arigam enclosure line; south by Habru halla and Kurumbur enclosure line; west by Kurumbur-Meenninatham footpath to Manjikatti karadu and Gurdumadavuhalla.
	V	1,432	North by line joining 2810, 2620, 2530, 3068 and streamlet; east by western boundary of Coupe IV; south by Habru halla and Kurumbur enclosure line; west by line from 2810 to Anaikeri enclosure line, the line and Anaikeri-Mari-Irittipalayam footpath.
	VI	2,542	North by Kadahatti-Anaikerai path joining Bensimalai and Varaihalla; east by Western boundary of Coupe V; south by Habru halla and Guthialathur enclosure line; west by Dasanayakanur-Kadahatti footpath.
5. Gundri	I	2,010	North by line joining Rangamalai and Mulakadambur Anjanai footpath; east by Rangamalai, Urugamalai, Palayaur, Gunduvarai ridge, south by Malliammadugam enclosure line and Pumalai Pallam; west by Guthialathur enclosure line and Pumalai Pallam.

Sathyamangalam Range—cont.

Serial number and Reserved Forest.	*Felling Series.*	*Total area.*	*Boundaries.*
(1)	(2)	(3)	(4)
		ACS.	
5. Gundri—*cont.*	II	3,786	North by Habruhalla and Arigiam enclosure line east by Kottaigumma ridge and Anjanai–Gundri footpath; south by north-east ridge from Rangamalai joining with Gundri-Anjanai footpath; west by Guthialathur closure line and stream to Habru halla.
	III	3,158	North by Gujjanpalayam-Arigiam footpath; east and south by Gundri enclosure line and Gundri-Kavalur footpath; west by kottai gumma ridge and Anjanai Gundari footpath.
	IV	3,674	North, east, south and west by the water shed of Babru halla between Argiam and Makkanpalayam enclosure line.
	V	6,722	North by Pal Ar; east by Pal Ar. and streamlet; south by Ariganatham-Kanakkampalayam footpath; and west by Belanathuhalla and ridge there from to Makkanpalayam footpath and Gundri enclosure line and footpath.
	VI	1,352	North by Gundri enclosure line; east by Ariganatham—Kanakkampalayam footpath, south by southern boundary of the felling series; and west by Gundri-Kavalur footpath.
6. Hassanur	I	1,536	North by northern boundary of the felling series; east by line joining Mothikampananai Betta, Hanur Betta and Hassanur enclosure line; south by Hassanur enclosure line; and west by Hasanur Ghat Road.
	II	993	North by northern boundary of the felling series; east by Hasanur-Konurmalai Gudi footpath; south by Hassanur enclosure line; and west by line joining Hanur Betta, 3431 and Hassanur enclosure line.
	III	673	North and east by line joining Hassanur Konurmalaigudi footpath with Geddasal road; south by Geddasal road and Hassanur enclosure line; and west by Hassanur-Konurmalaigudi footpath.
	IV	1,003	North by Geddasal road; east by line joining Geddasal road, 4158, Tenavaraipallam, 3981 and Kanagiripallam and west by Hassanur enclosure line.
	V	746	North by Kanagiripallam; east by line joining Kanagiripallam and Nisani Betta; south by line joining Nisani Betta and Hassanur Ghat road; and west by Hassanur Ghat road.
	VI	1,569	East by Hassanur Ghat Road and Hassanur enclosure line; south and west by line joining Hassanur Ghat Road, 3424, 3510, 3720, 3850 and on to the road itself.
7 Kotaddai	I	2,842	North by northern boundary of the felling series; east by eastern boundary of the felling series; south by Odamandai-Yekkathur footpath and Navahalla-Geddas road footpath; and west by Geddasal road and line through ridge containing 4891, 5311 and Kansinibetta.
	II	1,628	North by Mavahalla enclosure line and Mavahalla Geddasal road footpath; east by Devernatham enclosure line and footpath from Devernatham to Mavehalla and Kotadai; south by Tenavarai pallam; west by line joining Tonavaraipallam and Geddosal oad.

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area.* (3)	*Boundaries.* (4)
		ACS.	
	Sathyamangalam Range—cont.		
7 Kotaddai—*cont.* ..	III	847	North by Tenavarai pallam; east by Kottaddai enclosure line; south by a line to be cut running due west from Kotadai enclosure line to the bend in Kanagripallam; west by line passing through Kadakadai Mokkai and meetingTenavarapallam and Kanagiripallam.
	IV	518	North by southern boundary of coup III; east by Kotadi enclosure line; south by Dimbam-Osahatti footpath; and west by streamlets to Kanagiripallam.
	V	1,246	North by Dimbam—Osahatti footpath; east by Kotadai Chikkarasampalayam footpath south by line joining Chikkarasampalayam footpath 8928; Malaichakaram temple and Dimbam Osahatti road.
	VI	1,116	North by Odamandai-Betmund Halla footpath; east by Betmund Halla; south by line joining Betmund Halla with 4049 and Chikkarasampalayam footpath; and west by Kotadai enclosure line and Kotadai Devaranatham footpath.
	Talamalai Range.		
8 Talamalai	I-A I-B	3,572	North by streamlet, Talamalai enclosure line and Talamalai-Dimbam road; east by south and west by the boundary of the felling series; north by 4107 streamlet to Odurkuttai Halla; east by 4177 (Senalikannubettai) 4142, 4098, 4208, 4156 (Hosaparai) 4090 ridge and a line to a point near 4020 on the footpath from Galidimbam to Mavanatham up to3rd mile on the Dimbam-Talamalai road, then road to streamlet near 3rd mile 3rd furlong, then streamlet; south by a line joining 4177, 3750 and then stream as far as 3810, west by a line joining 3810, Mariammankoil (on Kinnarimandal-Galidimbam footpath) 4070 (Barindu) 4107.
	II	4,092	North by Kodamballihalla; east by eastern boundary of the feling series; south by Dimbam Talamalai road; and west by Talamalai enclosure line, Kodipuram-Hassanur footpath and streamlet, Naidalapuram enclosure line.
	III	2,237	North by Naidalapuram enclosure line and streamlet; east by Kodipuram-Hassanur footpath and Talamalai enclosure line; south by Talamalai enclosure line; and west by Talamalai Mudiyanur footpath; Mudiyanur enclosure line and Naidalapuram-Mudiyanur footpath.
	IV	2,362	North by Naidalapuram -Tiganari footpath; east by Naidalapuram and Mudiyanur enclosure lines, Mudiyanur; Naidalapuram footpath; south by Mudiyanur-Jeergahalli-footpath; and west by western boundary of the felling series.
	V	2,058	North by Mudiyanur enclosure line and Mudiyanur Jirgahalli footpath; east by Talamalai enclosure line and Talamalai-Mudiyanur footpath, south by streamlet; and west by western boundary of the felling series.
	VI	1,760	North by streamlet; east by Talamalai enclosure line; south and west by streamlet.

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area.* (3)	*Boundaries.* (4)
		ACS.	
		Talamalai Range—cont.	
9 Naidalapuram .. —	I	1,315	North by Talamalai reserved forest boundary; and Chikahalli-Malkuttipuram footpath; east by Naidalapuram-Malkuttipuram footpath; south by Naidalapuram enclosure line; west by Naidalapuram-Tiganarai footpath and Dodda halla.
	II	1,686	North by Chikkahalli enclosure line, Chikkahalli-Malkuttipuram footpath; east by Chikkahalli Naidalapuram footpath; south by Naidalapuram enclosure line; and west by Naidalapuram-Malkuttipuram footpath.
	III	1,068	North by Jogattihalla; east by Kodamballihalla; south by Naidalapuram enclosure line; and west by Naidalapuram-Chikkahalli footpath.
	IV	592	North by Sagunahalla; east by Kodamballi-Higgalur footpath; south and west by Kodamballihalla.
	V	—	North by Sagunahalla; east by eastern boundary of the felling series; south by Kodamballihallai and west by Kodamballi-Huggalur footpath.
	VI	2,034	North by Chikkahalli enclosure line Chikkahalli-Hassanur footpath; east by eastern boundary of the felling series; south by Sagunahalla; and west by Kodamballi-Higgalur footpath.
10 Chikkahalli .. —	I	709	North by the reserved boundary; east by Jagahattihalla, south by Chikkahalli-Malkuttipuram footpath; and west by the reserve boundary.
	II	469	North by the reserve boundary; east by Chilkkahalli-Maharajanpuram footpath; south and west by Halbiddahalla.
	III	444	North by Halbidahalla, east by Chikkahalli enclosure line; south by Chikkahalli-Malkuttipuram footpath; and west by Jogahattihalla.
	IV	718	North by the reserve boundary, Maharajanpuram-Muthanpalayam footpath; east by Chikkahalli-Marur footpath; south by Chikkahalli enclosure line; and west by Chikkahalli Maharajanpuram footpath.
	V	3,805	North and east by the range boundary; south by Chikkahalli-Makanpalayam and Chikkahalli-Marur footpath; and west by the reserve boundary.
	VI	3,415	North by the range boundary; east by eastern boundary of the felling series; south by Chikkahalli Hassan, footpath and Chikkahalli enclosure line; and west by Chikkahalli-Makanpalayam footpath.
11 Jiragahalli .. — —	I	5,473	North by Tignari-Naidalapuram footpath, east by line joining the footpath and 3232, Kahala Guddai, 3453, 3263, 3240 ridge and streamlets; south by Jiragahalli-Talamalai footpath; and west by Talamalai reserved forest boundary.
	II	1,714	North by Talamalai reserved forest boundary; east by Jiragahalli-Talamalai footpath; south by line through Jeragahallibetta ridge; and west by Gattavadi-Bommankatai footpath.
	III-A	3,300	North by Talamalai reserved forest boundary, Belathin shrine footpath; east by Gettavadi-Bommankattai footpath; south by line joining footpath; Jaladaoddu; 2960, 3176 and Arekaldevaragudi; and west by Seyatti halla.

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area.* (3)	*Boundaries.* (4)
		ACS.	
11. Jilragahalli—cont.	III-B	3,561	North by line joining Mangalhatti, 2554, 2619, 2880, 2796 and 2804; footpath and east by Belathur-Mayar footpath; south and west by the Mayar river.
	IV	3,264	North by Palayam-Kadapur footpath; east by Talamalai reserved forest boundary; South by Belathur-shrine footpath and on to Sigattihalla; and west by Sigattihalla.
	V-A	493	North by Akkunjorai reserved forest and extension reserved forest boundaries; east by Akkujorai extension reserved forest; south by stream to the north of Kambeswargudi; and west by Akkunjorai reserved forest boundary.
	V-B	3,722	North and east by Talamalai reserved forest boundary; south by Palayam-Kadapur footpath; and west by Talamalai reserved forest boundary.
	VI	848	North by stream to the north of Kambeswargudi; east, south and west by Akkurjorai extension reserved forest boundary.
Bhavani Range.			
12 Ondanai	I	2,500	North by Bhavani range boundary; east by Talakarai enclosure line; Soraibatti-Talakarai footpath, south from footpath a line to 4393, thence to Onlaikandi and then to stream; and west by stream.
	II	1,190	North by Talakarai enclosure line; east by Anthiyur-Talakarai footpath; south by the southern boundary of the felling series; and west by Socaihatti-Talakarai footpath.
	III	652	North by Bhavani range boundary; east by Varathupallam; south by the southern boundary of the felling series; and west by Anthiyur-Talakarai footpath and Talakarai enclosure line.
	IV	1,442	North and east by Bhavani range boundary also Ondani-M'koil footpath; south by the southern boundary of the felling series; and west by Varathupallam.
	V	723	North by Malaiparai-Erathi footpath; east and south by the southern boundary of the felling series; and west by Ondani enclosure line and Ondani-M'koil footpath.
	VI	1,500	North by Bhavani range boundary; east by eastern boundary of the felling series; south by southern boundary of the felling series; and west by Mulaiparai-Erathi footpath.
Mettupalayam range.			
13 Halur	I	3,149	North by Jakkanara slopes reserved forest boundary; east by Mettupalayam-Kunjapanaibridlepath: south and west by Jakkanare slopes reserved forest boundary.
	II	3,197	North, east and south by Jakkanara slopes reserved forest boundary; and west by Mettupalayam-Kunjapanai bridlepath.
	III	107	North, east, south, and west by Constantia reserved forest and sandalwood reserved forests (1) and (2).

Serial number and Reserved Forest. (1)	*Felling Series.* (2)	*Total area.* (3)	*Boundaries.* (4)
		ACS.	
Mettupalayam Range—cont.			
13 Halur—*cont.*	IV	6,665	North by Athia pallam; east by Nilgiris eastern slopes reserved forest boundary; south by Pudur-Velamundi chatram footpath and line joining it with Kullankerai pallam; west by Nilgiris eastern slopes reserved forest boundary; and Kullamparai pallam.
	V	483	North by line joining 4,230 with Athipallam (to be cut and maintained); east and south by Athipallam; and west by Nilgiris eastern slopes reserved forest boundary.
	VI	1,041	North by Appa pallam and line joining it with the reserved forest boundary to the west; east by Athipallam; south by line joining 4,230 with Athipallam (to be cut and maintained); and west by Nilgiris eastern slopes reserved forest boundary.
14 Manar	I	234	North by Molparli-Sinna Mulli footpath; east by Manar river; south by Bhavani river; line joining by Orathakadu and Borathorai.
	II	883	North by Molaparali-Sinnamulli footpath; east by line joining Orathakadu with Borathorai; by Bhavani river; and west by Malabar boundary.
	III	203	North and east by Manar river; south by Melparallis Sinnamutti footpath; and west by district boundary.
	IV	774	North by line joining Manjakamboo footpath with Shappaguddo pallam; east by Shappaguddo pallam; south by Manar river; and west by Manjakamboo footpath.
	V	3,946	North by Range boundary and Northern boundary of Nellithorai Block VIII reserved forest; east by Nilalai pallam; south by Bhavani river; and west by Manar river and Shappagudda pallam.
	VI-A	899	Kallar reserved forest.
	VI-B	283	North and east by Coonoor river; south and west by line joining Nellithorai block VII reserved forest boundary and the old district boundary.
	VI-C	40	Kandiyur island (in Bhavani river near Umbalamalai).
	VI-D	10,952	North by Bhavani river; east by stream starting from 2666 to the south of Usimalai 2154, which joins Manthorai pallam north of Monthorai village and thence along the reserved forests; south by Anasur-Koravankandi footpath till it meets Bhavani river; and west by Bhavani river.
Bhavani Range.			
15 Plains	I	3,250	North by northern boundary of the Ennamangalam reserved forest, Chinnavalukkuparai pallam and line joining Chinnavalukkuparai pallam with Makalperadu and on through 2779 to Mathur Matam footpath; east by Andipattiyur pallam and Ennamangalam reserved forest boundary; and west by Bhavani-Kollegal Road.
Satyamangalam Range.			
16 Plains	I	3,303	North by line joining Chinnarayal Boli with Emmathu Kombai; east by line joining Emmanthur Kombai with Pallimalagumma; south by streamlet from Palligumma Guthialathur reserved forest boundary; and west by Kolathur pallam.

*Sathyamangalam Range—*cont.

Serial number and Reserved Forest.	*Felling series.*	*Total area.*	*Boundaries.*
(1)	(2)	(3)	(4)
		ACS.	
16 Plains—*cont.*	III	1,830	North by line joining Angara Oddu, Vengayapattimari and Chinnarayan Boli; east by Kolathur pallam; south by Guthialathur reserved forest boundary; and west by stream.
	IV	3,570	North by line joining Boliga Thittu, Olakaparai Thittu and Angara Oddu; east by stream; south by Guthialathur reserved forest boundary; and west by Chikkarasampalayam-Soliga Thittu footpath.
	V	3,874	North and east by Chikkarasampalayam, Soliga Thittu footpath and Guthialathur extension reserved forest and again Guthialathur reserved forest boundary; south by Satyamangalam-Hassanur road; and west by Satyamangalam-Hassanur road up to tenth mile seventh furlong and thence a line to Soliga Thittu.
17 Plain	VI-A	284	North by Satyamangalam-Hassanur Ghat road; east and south by Guthialathur reserved forest boundary; and west by Bennari-Kothamangalam road.
	VI-B	2,580	North by line joining Masanigudi with Talamalai Gajalatti footpath and Talamalai Doddakombai-Peerkadavu footpath; east by Budhuppahalla; south and west by the Moyar.

SECTION 6—OTHER REGULATIONS.

174. *Retail sale of sandal billets.*—The retail sale of sandal billets for *bona fide* domestic use will be continued as hitherto. The Head Clerk of the District Forest Office, and the Range Officers, Bhavani, Mettupalayam, and Sathyamangalam will be the salesmen and they will keep sufficient stock to meet the demand. The present mode of price fixation and maintenance of accounts will continue.

175. *Fire protection.*—No special measures of fire protection are proposed for this working circle.

CHAPTER III—WORKING PLAN FOR THE VILLAGE SANDAL WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

176. *Constitution.*—The village sandal working circle includes all the sandal areas in the hill villages is the North Coimbatore Plateau and in Mettupalayam range and in the plains villages in the vicinity of forests in all the four ranges.

177. *Area.*—The approximate area of the working circle is 95,024 acres and 4 cents.

178. *Division into felling series.*—As far reaching changes are being introduced in the prescriptions in this chapter the transition to the new procedure will be much facilitated in practice, by the retention of the existing frame work as far as possible. Accordingly the working circle is divided into the following fourteen series, eleven of which are the same as before.

179. *Statement of village sandal felling series* —

Statement of felling series in Village Sandal Working Circle.

Villages and hamlets included in the felling series. (1)	*Limits of the felling series.* (2)	*Total number of survey fields.* (3)	*Total area of survey fields in acres.* (4)	*Number of fields containing sandal.* (5)	*Area of fields containing sandal in acres.* (6)	*Total number of sandal trees.* (7)
SATYAMANGALAM RANGE.						
1. *Hassanur Felling Series.*						
Hassanur .. .. Binakanhalli .. .. .. Devaranatham .. .. .. Osahalli .. .. Mavahalla	The whole of each enclosure	323	2,568·29	235	2,179·39	5,980
2. *Thingalore Felling Series.*						
Thingalore .. .. Germalam	The whole enclosure.	607	8,052·93	299	6,436·23	10,931
Kadagoundan halli and Ullepalayam of Guthiyaluthur village and part of S.F. No. 691.	The whole of Ullepalayam enclosure.					
3. *Gundri Felling Series.*						
Gundri .. .. Makkampalayam .. .. .. Arigiam .. .. Kurumbur .. .. Anakkarai and Digganari ..	The whole of each enclosure	461	7,281·48	196	6,056·82	13,418
4. *Athiyar Felling Series.*						
Athiyur hamlet, Pudur hamlet, Germalam hamlet, Pavalakuttai hamlet, Hosapalayam hamlet, Asagattikombi hamlet, Nadur and Eriyur hamlets, Kalkadambur hamlet, Thondur hamlet, S.F. No. 691 (part).	The southern portion of Yekkathur enclosure in Guthiyalathur village comprising the hamlets shown in column (1 and part of S.F. No, 691, except S.F. Nos. 816, 817/1,2 of Thondur hamlet.	550	5,453·82	308	4,676·45	20,504
Malliammadurgam	The whole of Malliammadurgam enclosure.					

5. Yekkathur Felling Series.						
Yekkathur, Giddampalayam, Modikadaru, Thirumalanayakanur, Jippanayakanur, Basavanapuram, Yelanchi, Karaliam, Kanekundur hamlets part of S.F. No. 691 and Kakkarai.	The portion of Guthiyalathur village (Yekkathur enclosure between the Ullepalayam and Barabetta reserved forests comprising the hamlets shown in column 1 and a part of S.F. No. 691. The whole of Kakkarai enclosure.	575	4,893·23	403	4,241·22	10,271
6. Erittipalayam Felling Series.						
Erittipalayam, Billimogai, Akkichivanadoddi, Kilalattur, Dinnayur, Salahalli hamlets S.F. No. 691 (part) three fields of Thondur hamlet.	The eastern portion of Yekkathur enclosure in Guthiyalathur village comprising the hamlets shown in column 1 and S.F. Nos. 816, 817/1, 2, of Thondur hamlet and a part of S.F. No. 691.	310	3,612·35	175	3,076·01	8,476
TALAMALAI RANGE.						
7. Talamalai Felling Series.						
alamalai, Doddapuram, Seeragoundanhalli, Kodipuram, Mudiyanur, Galidembam Ittaria and Thadasalathy Bejjalatty.	The whole enclosure	673	3,262·08	204	1,572·58	3,258
8. Naidalapuram Felling Series.						
aidalapuram and Kodamballi ..	The whole enclosure	309	1,658·73	167	1,122·61	2,937
9. Chikkahalli Felling Series.						
Higgalur	The whole enclosure.					
Merur .. .. Talavady .. .. Doddagazanur .. .. .. Chikkagazanur	The whole of each village.	..	..	513	2,934·81	4,839
10. Doddamudugarai Felling Series.						
Doddamudugarai, Gettivadi, Kongalli, Pankalli, Beyanapuram, Madhalli.	The whole of each village	..	..	573	6,576·43	23,251
11. Tiganari Felling Series.						
Tiganari, Eruganahalli, Karalavady, Mallankulli, Aralavady Badagalupur.	The whole of each village and the whole enclosure.	..	..	371	11,368·10	22,447

Statement of felling series in Village Sandal Working Circle—cont.

Villages and hamlets included in the felling series. (1)	*Limits of the felling series.* (2)	*Total number of survey fields.* (3)	*Total area of survey fields in acres.* (4)	*Number fields Containing sandal.* (5)	*Area of fields containing sandal in acres.* (6)	*Total number of sandal trees.* (7)
	TALAMALAI RANGE—*cont.*					
	12. *Mettupalayam Felling Series.*					
Odanthorai, Kunjapanai .. .. Manar	**All** survey fields in the village .. .. Do. S.F. No. 6 ..	..	3,649·41	187	1,184·51	6,355
	Satyamangalam Range.					
	13. Plain Series	..	938·64	23	938·64	1,013
	BHAVANI RANGE.					
	14. *Plains Series.*					
Ennamangalam	Only 8 survey fields in the village, i.e., 605, 648, 656, 973/2, 674-A-6, 674-3. 674-4A and 674-5.	8	198·26	8	198·26	80

SECTION 2—ANALYSIS AND VALUATION OF CROP.

180. A complete enumeration of trees over 6 inches in girth has been carried out by the Working Plan staff in the patta lands and unreserves in the working circle. This detailed enumeration gave an idea of the present growing stock which enabled a comparison with the 1928–32 enumeration figures of the same area. The figures of this complete enumeration will soon be out of date on account of the growth, death and possible extraction of the trees originally measured and hence there is no further use for them. Besides, running records of Government trees in all categories of village lands will be maintained in future, in accordance that with the prescriptions below. It is hardly satisfactory that at each revision of the Working Plan, a complete enumeration of the working circle is done and no running record is maintained.

181. The total growing stock now consists of 1,36,807 trees over 6 inches girth (against 2,60,362 trees found in 1931–32 in the area).

Growing Stoch in the Village Sandal Working Circle.

Serial number and locality.	Healthy trees.								
	6″–12″	12″–18″	18″–24″	24″–30″	30″–36″	36″–42″	42″–48″	48″–54″	*Total.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1 Patta fields ..	14,702	9,946	4,566	1,337	345	81	20	3	31,000
2 Unreserves ..	49,859	21,704	7,407	2,007	609	177	79	7	81,579
Total ..	64,291	31,650	11,973	3,344	954	258	99	10	1,12,579

Serial number and locality.	Dead trees.							
	6″–12″	12″–18″	18″–24″	24″–30″	30″–36″	36″–42″	42″–48″	*Total.*
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1 Patta fields ..	1,622	919	322	97	16	3	3	2,982
2 Unreserves ..	12,859	4,199	740	199	60	15	14	18,086
Total ..	14,481	5,118	1,062	296	76	18	17	21,068

Serial number and locality.	Spiked trees.							*Grand total.*
	6″–12″	12″–18″	18″–24″	24″–30″	30″–36″	36″–42″	*Total.*	
	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
1 Patta fields ..	353	139	62	16	7	1	578	34,560 (about 49,400
2 Unreserves ..	1,736	524	214	77	17	14	2,582	102,247
Total ..	2,089	663	276	93	24	15	3,160	136,807

SECTION 3—METHOD OF TREATMENT.

182. The objects of management of the working circle are of peculiar nature and may be stated as follows :—

(1) to exploit the sandal trees that belong to the Government and to purchase and exploit all privately owned sandal trees;

(2) to offer the utmost inducement to the landholder, to preserve and improve the sandal stocking in patta lands, (*a*) by freeing the doubt regarding the ownership of the sandal trees. At present the position is obscure; and (*b*) by changing the process of compensation;

(3) to take steps designed to keep the private trader out of the field and to remove the scope for many malpractices; and

(4) to take effective measures to protect Government sandal trees.

183 *Analysis of sandal ownership.*—Briefly the position is as follows :—

(*a*) The ownership of sandal trees in unreserves and in all patta fields assigned after 1928 vests in Government.

(*b*) The ownership of the following categories of trees vests in the landholder—

(1) Trees in patta lands assigned before 1928 in Mettupalayam Range.

(2) Trees in patta lands assigned before 1928 in the plains villages of all ranges.

(3) Trees in lands in hill villages, which were assigned before 1907 and which are not under valid agreements with Government.

(4) Trees which have appeared after assignment in lands assigned before 1907 which are under valid agreements with Government.

(5) Trees which have appeared after assignment in lands assigned between 1907 and 1928, whether under agreement or not.

(*c*) In the case of pattas assigned before 1907 *and under agreement* as well as all lands assigned between 1907 and 1928 the ownership of trees that existed at the time of assignment vests in Government. This applies only to the hill villages in Satyamangalam and Talamalai Ranges.

184. The effect of this position is that the spheres of ownership by Government and by landholders are mutually exclusive, but for the fact that certain trees in the pre 1928 pattas belong to Government. If these sandal trees belonging to Government are determined the whole position becomes simple.

185. *Identification of Government trees in pre-*1928 *pattas.*—In the 1932 Working Plan, the identification was based on an annual girth increment of 0.5 inches. Such a solution (viz. to decide the age of a tree by this assumption was naturally provisional. Yet in the absence of any other solution, this basis was adopted and followed. The procedure has also acquired the force of caselaw since the decisions of the Madras High Court in the well-known case of *S. L. Giddiah* vs. *the Government of Madras.* This long drawn-out case opened in the Court of District Munsif, Gobichettipalayam in 1930 and went up before the High Court twice, viz., in 1942 and again in 1951, on different issues. The judgments have fully established the validity of 0.5 inch rule and also the official analysis of sandal ownership. The identification of Government trees has also to be based on the following assumptions as before.

1. In those pre-1907 agreement cases, where the date of assignment is not known, the date of agreement is taken as the date of assignment.

2. In cases of assignment before resettlement (B.R.S. cases) where the year of assignment is not known, it is taken to be year, 1907.

186. The categories of ownership are thus clear. It remains to lay down the details of the method of treatment. This will be governed by the policy intended to be followed in the villages.

187. *The future policy of the Department in villages.*—The policy of the department has varied between wide extremes in the past. One school of thought considered sandal in the villages a source of endless worry to the department and vexation to the pattadar and even set about the extermination of sandal in some hill villages, during 1929-31. This was soon stopped and the 1932 working plan enunicated the policy as follows :—

> "It is essential that the trade in sandal should be a state monopoly. The best method of achieving this end would be to declare sandal a 'Royal' tree, but this course does not commend itself to Government. We must, therefore, keep out the petty dealer by economic methods; in other words by offering for private sandal its market price which the petty dealer cannot afford to pay. This arrangement will be of mutual benefit to the Government and the pattadars, who are the only parties to be considered.
>
> "Our working of the villages must take into account all survey fields. In the case of fields where the trees belong to the land holder, the right to exploit the trees should be specifically acquired by agreements.
>
> "It must be remembered that in villages, the rights privileges and interests of the people are paramount. The village is not a field for the pursuit of silviculture. We must therefore be content merely with the exploitation of the sandal which nature has brought into the villages. Such exploitation must involve no avoidable hardship to the ryots. The presence of sandal on patta lands should be a source of additional income and not of annoyance to the pattadars".

188. The objectives were thus defined and the method of treatment laid down accordingly. Over twenty years of actual working have however shown that these hopes were not fulfilled. For one thing, the private trader still finds ample scope for this activities in the villages and the description of his pernicious activities in paragraph 464 of the 1932 Working Plan has if anything achieved added force. The following are typical of the complaints received and indicate the lines for changes imperatively called for :—

1. *Payment of compensation.*—In the payment of compensation delays of even 4 to 5 years after extraction are common. Cases of non-payment and wrong payment are also reported.

2. Mix up of reserve trees and patta trees in the Forest Depot—may be a genuine mistake may be not (the pattadar standing to gain if reserve trees are shown as extracted from his field).

189. It will be idle to refute such complaints entirely. The conseqence of this situation is that the administration is kept busy with the legacy of long pending cases of determination of ownership and the land holder continues to find sandal a cause of vexation and trouble and almost never a source of wealth. It is very strange indeed the pattadar should prefer marginal dry cultivation to the wealth of sandal that nature will so readily give him.

190. The root cause of these ills is the lack of precise field evidence of ownership and the present necessity for it to be decided with reference to agreements and records in the District Forest Office and Taluk offices, often several years after the extraction. Once the Government trees in pre-1928 patta lands are determined these difficulties are solved.

191. *Disposal of Government trees in pre-1928 pattas.*—Once the Government trees are identified, the question next arises regarding their future. If all these trees are extracted, there will be no more complications. But these Government trees are mostly green and growing trees and are all over 14 inches $\frac{(1956-1928)}{2}$ in girth. It is generally accepted that these big trees are the mother trees for the pattas and unreserves also. Provided these trees are distinctly marked, it is better to retain them till their eventual death and extraction. The number of such trees is so small that their numbering and maintenance should not cause much trouble at all.

192. It is therefore prescribed that the Government trees in the pre-1928 pattas will be numbered serially for each coupe in each series, along with the enumeration of dead trees in that coupe, during the first felling cycle. Detailed sketches for each coupe on 16 inches—7 mile showing the location of trees in pre-1928 pattas will be maintained.

193. *Running record of sandalwood trees.*—Of the three categories of sandal trees, mentioned earlier the third, viz., item (*c*) will be dealt with as stated above. As for (*b*), there is no need to maintain any list of land holders trees; (*a*) remains.

194. Under the standing orders of the Board of Revenue, all pattas assigned after 1928 are conditional upon the maintenance of sandal trees, the fulfilment of which the Revenue authorities are enjoined to look after. Again, thanks to the confused position of ownership, their duty is only nominally performed. With the present analysis of ownership, it will be adequate if a correct record of trees over post 1928 pattas and unreserves alone is maintained upto date at all times, taking into account the extraction also. This is a duty which the village officers should not neglect any longer.

195. *Other simplifications.*—There is no need for this department to concern itself with the assignments after 1928, and to maintain the register of new assignments.

196. It will be enough if a copy of the enumeration list is furnished to the Tahsildar immediately after enumeration and well before extraction so that the village officers may bring this list of trees in each field upto date. Early in the official year the Tahsildar will send copies of the annual enumeration list of trees left classified girthwar and into the three types (healthy, dead and spiked) to the Range Officer concerned and to the District Forest Officer.

197. The maintenance of such running records is an essential precaution towards the protection of sandal in the post–1928 patta fields and sivoijama lands. This was always supposed to be done and figures in the check of village accounts in the annual Jamabandi. It is time that the letter and spirit of the B.S.O. were faithfully observed. There is no other means of stopping the destruction of sandal trees by the *sivoijama* cultviator. (Please see paragraphs 481 to 483 of the 1932 Working Plan).

198. *Felling cycle.*—Admittedly the ideal *course* is to go over the entire Working Circle every year. Limitation of staff and labour and vastness of the areas preclude the possibility. Besides, the existing framework is being retained in order to facilitate a smooth transition to the new procedure. Accordingly a felling cycle of three years will continue to apply to all the felling series except the following village series which are of small extent.

1. Mettupalayam village series.
2. Bhavani plains series.
3. Sathyamangalam plains series.

The first is much reduced in size due to the submersion of part of the area under the Lower Bhavani Reservoir. The second and third formed part of Satyamangalam plains series and are new separated into two series. In these three cases, the entire series will be exploited annually and there is no need to form coupes.

199. *Regulation of working.*—The working shall be regulated by area. No attempt is however made, to form equiproductive coupes, as sandal mortality does not follow any law and as the actual yield from the coupes in the past has shown extreme variations.

200. *Calculation of the possibility.*—With such unpredictable factors, forecast of yield can be *little* better than a guess. However, on the basis of the average yield during the past twenty three years, a figure of 60 tons is adopted.

201. *Acquisition of private sandal.*—Apart from the Government trees marked in the pre-1928 pattas, all the growth, present as well as the future, belong to the land-holder. As there is no legislative power to compel the land holder to sell his trees, only to Government, the trees have to be acquired only by private negotiation. It is noteworthy that private merchants purchase trees from the pattadars at meagre flat

rates per standing tree. Immediate payment is a powerful consideration to the landholder. With the rates of compensation, that are now in force, the department can easily out bid the private merchant. More, so, if the rates are raised as contemplated. However, in order to create a firm footing for the department it is recommended that in the first felling cycle under this plan, agreements will be got executed by all owners of pre-1928 pattas in the hill villages of Satyamangalam and Talamalai Ranges.

These agreements will specify the particulars relating to the Government trees (if any) standing in the fields and state that all the rest of the growth standing as well as arising in future is the property of the pattadar and that he binds himself to sell only to Government at rates fixed from time to time by the Chief Conservator of Forests and that the trees will be exploited solely at the pleasure of the Department.

202. *Payments for patta sandal.*—Payments for patta sandal are of two kinds, namely :—

(i) payments to pattadars for protecting Government trees till they are exploited; and

(ii) payments for the value of trees purchased by Government from pattadars.

The rate in force for protection of Government trees is Re. 1 per quarter of rough cleaned wood. This applies only to pre-1928 pattas and no payment is made in respect of post 1928 pattas. The introduction of payment for the latter is under consideration. There is no necessity for payment of protection charges for Government trees in sivoijima lands

In respect of sandal trees which are the property of the pattadar and which the pattadar has agreed to sell to the Forest Department, payment is now made on the basis of the actual weight of the rough cleaned wood obtained from the trees. The value of 47½ per cent of this weight at the rate obtained for final cleaned wood during the current year at Satyamangalam and Tiruppattur auctions is paid to them.

203. *Procedure for payment.*—Whatever the quantum of compensation, it is proposed that half of it in the case of pattadar's trees and the whole of it in the case of Government trees, will be disbursed to the pattadar, immediately on the weighment of the rough cleaned wood and in any case before the wood leaves the Forest Depot. Payment in the first case will be based on the previous year's average price. The balance will be paid after the current year's average price is fixer by the Chief Conservator of Forests after the December sales. Every effort will be made to complete extraction, transport and final cleaning before December so that the wood is included for the December sales.

204. *Publicity for the new procedure.*—A vigorous drive to bring home to the hill villagers their precisely defined rights and how sandal trees are sources of wealth to them is necessary. The private merchant and the bad type of pattadar have held the field till now and long enough. With enthusiastic work, the outlook for village sandal can be radically changed in the course of a few years. The execution of agreements for all the pre-1928 pattas will need a great deal of patience and hardwork on the part of the territorial staff. But this plodding work during the first three years will be, it is hoped, amply rewarded by the results achieved, viz., the exclusion of private merchants and a fair deal for the private sandal owner.

SECTION 4—METHOD OF EXECUTING THE FELLING.

205. The following rules will be strictly observed :—

(1) In all classes of unreserves and patta fields, only dead trees will be extracted. Extraction will be strictly confined to the coupes of the year.

(2) The unit of enumeration and extraction should be a survey field. In the case of subdivisions of a field owned by different pattadars, the subdivision shall be the unit of working. Blocks of unreserves consisting of several survey numbers will be dealt with as one unit.

(3) The particulars of enumerations of each patta field on subdivision will be shown separately when necessary, but the numbering of trees in a coupe shall be done serially.

206. As for the extraction and transport, etc., the revised sandal felling rules will be carefully followed.

207. The proper maintenance of survey stones is a work of prime importance. The District Forest Officer will seek the co-operation of the Collector in ensuing that the stones are kept in order by the Revenue Establishment.

SECTION 5—TABULAR STATEMENT OF FELLING.

208. The following statement shows the sequence of coupes to be worked in each of the eleven series for which a three year felling cycle is prescribed. For the sake of completeness, the other three felling series, viz., Mettupalayam, Satyamangalam plains and Bhavani felling series, to be gone over annually are also included.

Tabular Statement of coupes—Village Sandal Working Circle.

Coupe number. (1)	*Name of series.* (2)	*Total number of Survey fields.* (3)	*Total area of fields in acres.* (4)	*Number of fields containing sandal.* (6)	*Area of fields containing sandal in acres.* (6)	*Total number of sandal trees.* (7)
I	Naidalapuram	129	703·30	74	510·92	1,753
II	Do.	76	409·54	24	188·92	260
III	Do.	104	545·89	69	422·77	924
I	Chickalli	..	..	106	633·48	1,329
II	Do.	..	..	396	2,234·86	2,729
III	Do.	..	..	9	66·47	781
I	Doddamudugarai	..	..	348	4,411·19	5,432
II	Do.	..	..	209	1,474·34	8,140
III	Do.	..	..	16	690·90	9,679
I	Tignari	..	..	21	454·44	1,611
II	Do.	..	..	273	9,690·19	11,570
III	Do.	..	..	77	1,223·47	9,266
I	Talamalai	209	1,016·13	70	500·22	530
II	Do.	176	711·75	40	390·10	518
III	Do.	288	1,534·20	94	682·26	2,210
I	Mettupalayam	2,075	2,649·41	676	1,184·51	6,355
I	Yekkathur	243	2,013·11	166	1,661·62	2,811
II	Do.	163	1,501·11	129	1,382·82	4,684
III	Do.	169	1,379·01	108	1,196·78	2,776
I	Erittipalayam	44	546·11	24	474·15	937
II	Do.	102	2,054·65	48	1,825·90	5,119
III	Do.	164	1,012·59	103	775·96	2,420
I	Athiyur	302	2,362·11	148	1,873·67	10,192
II	Do.	241	2,540·06	154	2,260·62	8,059
III	Do.	7	551·65	6	542·16	2,253
I	Hassanur	40	502·89	39	473·11	2,565
II	Do.	221	1,494·26	144	1,187·93	2,320
III	Do.	62	571·14	52	518·35	1,095
I	Thingalore	299	2,948·88	129	2,159·18	1,892
II	Do.	307	4,529·51	169	3,702·51	6,560
III	Do.	1	574·54	1	574·54	2,479
I	Gundri	29	464·46	14	395·33	571
II	Do.	207	5,571·30	63	4,769·38	10,545
III	Do.	225	1,243·67	119	892·11	2,297
I	Satyamangalam Plains	23	938·64	23	938·64	1,013
I	Bhavani	8	198·26	8	198·26	80

SECTION 6—SUBSIDIARY SILVICULTURAL REGULATIONS.

209. It is expected that with greater understanding of their rights, the ryots in the hill villages will devote ever-increasing attention to the care and conservation of sandal natural regeneration and even interest themselves in the propagation of sandal over the field bunds at least. The success of the new policy will be reflected in the enthusiasm inculcated in the land owners. The Range Officer and staff of Talamalai and Satyamangalam Ranges should render all possible assistance to the ryots including the supply of seed if necessary. The latest technique of sandal propagation will be taught to the ryots who come forward to do such work.

CHAPTER IV—WORKING PLAN FOR THE FUEL WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

210. The Fuel Working Circle includes almost all areas under fuel working now, with some additions and alterations suggested by past workers. It includes also one new area on the plateau near Talavadi and some plains forests to be worked for fuel for the first time since their transfer from Panchayat management in 1951.

211. *Division into felling series.*—The Working Circle comprises twenty-two felling series particulars of which are furnished below :—

Serial number. (1)	*Name of felling series.* (2)	*Reserve in which the series is located.* (3)	*Extent in acres.* (4)	*Markets.* (5)
Satyamangalam range—				
1	Bennari East.	Guthialathur.	1,748·00	Satyamangalam.
2	Kanavoicombai.	Do.	3,073·20	Do.
3	Satyamangalam.	Do.	2,084·90	Do.
4	Kempanaickenpalayam.	Do.	1,569·50	Satyamangalam and Kempanaickenpalayam.
5	Kongarpalayam.	Do.	1,668·00	Tookanaickenpalayam.
6	Bungalowpudur.	Do.	1,858·00	Bungalowpudur, Nanjaipuliampatti, etc.
7	Kanakampalayam.	Do.	2,364·70	Kanakampalayam and Kallipetti, etc.
Talamalai range—				
8	Bennari West.	Talamalai.	2,524·00	Satyamangalam.
9	Kumbaragundi.	Do.	1,489·00	Talavadi and other hill villages.
10	Pungar.	Talamalai R.F. and Extension.	1,748·00	Bavanisagar Colony.
Bhavani range—				
11	Doddacombai.	South Bargur and Nagalur Reserve Forests.	1,780·20	Attani and Gobichettipalayam.
12	Attani	South Bargur.	2,064·00	Attani and suburbs.
13	Michaelpalayam.	Do.	967·40	Anthiyur.
14	Ennamangalam.	Do.	1,917·60	Do.

Serial number.	*Name of felling series.*	*Reserve in which the series is located.*	*Extent in acres.*	*Markets.*
(1)	(2)	(3)	(4)	(5)
15	Chinnacombai	South Bargur and Ennamangalam.	2,166·40	Andhiyur and Bhavani.
16	Chennampatty	Do.	2,111·60	Thiruppur and Bhavani.
17	Chennimalai	Chennimalai and Villikaradu Reserve Forest	1,555·00	Chennimali and Erode.
Mettupalayam Range—				
18	Jakkanare	Jakkanare.	1,157·00	Mettupalayam and Coimbatore.
19	Sundapatty	Nellithorai Block VII.	1,633·00	Do.
20	Kandiyur	Kandiyur Block VI.	1,060·00	Do.
21	Tholampalayam	Thadagam Block IV.	2,497·00	Do.
22	Modur	Modur Pettikuttai.	2,982·00	Sirumugai.

212. The former Bennari series included part of Talamalai and Guthialathur Reserved Forests (in Talamalai and Satyamangalam Ranges respectively) and was under the administrative control of Talamalai Range Officer. This arrangement has been none too satisfactory. As suitable, hitherto unworked areas were available in both the reserves, these were added on and the series split up into separate Bennari East and Bennari West Series. Chennimalai, Odanthorai and Modur are the new fuel series constituted in the former Panchayat Forests. Kumbaragundi is also a new series formed to meet a pressing demand for firewood in the Plateau villages.

213. *Character of the vegetation.*—Practically the entire area in this Working Circle falls under Champion's provisional classification—Group 5 (*a*), i.e., Southern Tropical Thorn forests (described in detail in Chapter II of Part I).

SECTION 2—METHOD OF TREATMENT.

214. *Silvicultural system.*—The simple coppice system will be adopted with reservation of trees of certain species.

215. *Rotation.*—The coppice rotation will be reduced from 40 to 30 years as according to the State Silviculturist, the mean annual increment of most of the Principal fuel species culminates in the 25th year or so and all Research done so for indicates that the mortality among shoots 40 years old is much greater than in shoots 30 years old.

216. *Regulation of working.*—The yield will be regulated by area. The coupe system has been revived and on the felling series maps, each series is divided into 30 coupes of more or less equal extent with straight boundaries generally. One coupe in each series will be offered for sale every year.

SECTION 3—METHOD OF EXECUTING THE FELLINGS.

217. *Agency of exploitation.*—A study of the map would show how the fuel series skirt the forests of the division from the boundary of the Palghat Division, in the west to that of Kollegal division in the east with very few interruptions. Such is their situation that normal, orderly working of the fuel series should itself be a safeguard against large scale pilferage of headloads from this outermost belt. Unfortunately, however, this is hardly the case and in many localities fuel coupe contractors apparently do not hesitate to augment their income by issuing permits to smugglers of fuel headloads dry and green, collected at random from all over the forest. In particular, the

problem has reached alarming proportions in the Jakkanare and Odanthorai reserves in Mettupalayam Range. It seems eminently desirable to form co-operative societies of Harijans and Backward classes (as provided for under section 130-A of the Forest Department Code) to work annual coupes in these two series to begin with. It is possible that the price per acre of the coupe may have to be reduced below the average of the last 5 years and a fall in revenue results, but then, a great deal of indiscriminate damage will be minimised if the headload removals are confined to the coupe of the year. Besides, with the proposals for large scale irrigated plantations in Mettupalayam Range materialising employment during most of the year can be found for the labour and the manace of petty pilfering largely countered.

218. It is accordingly recommended that the fuel coupes of these two series should be normally worked by Co-operative Societies to be formed for the purpose. When this is not possible, these coupes may be offered for sale in auction in the usual manner. All the other fuel series will be sold in auction or by tender as heretofore, according to the orders in force.

219. Kumbaragundi series will be treated as a Reserve Fuel Series to be worked only when the local demand for fuel is keen and it is possible to ensure that the produce is consumed within Talavadi Firka. There seems to be no point in working this series if in any year the highest offer falls below Rs. 25 per acre.

220. *Period of lease.*—It is desirable to make the lease period proportionate to the size of the coupe. Accordingly the following suggestions are offered :—

Coupes of 20 acres or less : Voidah to be six months.
Coupes of 21 to 50 acres : Voidah to be nine months.
Coupes of 51 and above : Voidah to be twelve months.

Every effort should be made to convey the coupes to the respective lessees on the 1st of April.

221. *The annual coupe.*—In the Table in paragraph below, the coupe numbers and year of working have been given. Any unsold coupe will be offered for sale the next year along with that year's coupes.

222. *Survey and demarcation.*—Coupes will be surveyed and demarcated by cleared lines 10 feet wide with 1½ feet high white washed rough stone cairns erected at suitable intervals so that two adjoining cairns are visible from any one cairn. The surveyed sketch and the enumeration list of reserved trees (showing their species, girth and location) will be submitted to the District Forest Officer before the 15th December annually. While checking the prescribed percentage of surveys, the District Forest Officer will take particular care to verify the list of reserved trees. Each coupe will be divided into a convenient number of strips by means of cut lines of 6 feet wide. There shall not be less than two strips nor more than four in a coupe, a ship being ordinarily of 20 to 25 acres. Any difference below 10 per cent between the Working Plan area and the actual surveyed area will not be considered a deviation requiring sanction.

223. *Coupe arrears.*—If any portion of a coupe remains unfelled at the end of the lease period, such portion will be surveyd and reserved species re-enumerated as soon as possible, after the lessee quits the area. The District Forest Officer will offer the area in auction fixing a suitable voidah. If however, he is satisfied that the arrear portion contains very poor growth or it is inexpedient to clearfell it, he need not put it up for sale. Full reasons for such a step will be recorded in the Control Book.

224. *Felling rules.*—(*a*) The contractor should complete fellings and removal in a strip satisfactorily before he is permitted to proceed to the next one.

(*b*) The contractor may fell and remove all trees of species other than trees of the following species : *Santalam album* (Sandal), *Tamarindus indica* (*Tamarind*), *Sapindus emarginatus* (Soapnut), *Azadiracuta indica* (Neem), *Pongamia glabra* (Pungam), *Bassia latifolia* (Mohwa), *Calophyllum Inophyllum* (Pinnai), and such trees of any species as occur in the beds or on the banks of streams (the felling of which is likely to affect soil or moisture conservation). All trees so to be excluded from felling will be distinctly marked with a punched or chiselled serial number and the beat hammer mark on each of the two blazes, one at ground level and the other at breast height (on the diametrically opposite side of the stem). These trees will also be marked at breast height with a 1 inch band of coal tar. Individual stems that may be dead, dying, overmature, moribund or otherwise unlikely to survive the next few years may be felled, if after personal inspection the District Forest Officer so decides.

All useless species such as *Dalbergia paniculata, Gyrocarpus jacquini, Givotia rottleriformis*, etc., should be pollarded at abuot 4 feet height or so, to discourage natural propagation.

(*c*) Sharp implements are to be used for felling and the cut should be clean and slanting. It is needless to trim stumps. *The proper coppicing of the stool should be done at the time of felling itself and never later.*

(*d*) All timber will be kept at stump site until it is hammer-marked and passed by the Range Officer.

(*e*) No removal of firewood in cartloads will be allowed without prior billeting and stacking. The size of the stacks should be uniform for each felling series in accordance with local practice.

(*f*) All bamboos, avaram bark or other Minor Forest Produce occurring in the area shall remain the property of the Government and shall not be felled or removed by the fuel coupe contractor.

SECTION 4—TABULAR STATEMENTS OF FELLINGS.

225. *Statement of fellings.*—The prescribed annual statement of fellings in the Fuel Working Circle is given below for the next 15 years :—

SECTION 5—OTHER REGULATIONS.

226. *Demarcation of worked coupes.*—Soon after the completion of fellings in a coupe, the corners of the coupe shall be demarcated by planting stone slabs. In the case of coupes with more than four sides it is enough if four salient corners are demarcated. The number of the coupe and the year of working, and those of the adjoining coupe shall be engraved on the stone slabs.

227. *Grazing Regulations.*—It has been the time honoured practice in the State, to close fuel coupes to grazing only during the first five years including the year of felling. Latterly, a new school of thought has come into being, in favour of closure, if at all, during the latter part of the rotation. The grounds set forth in defence of this idea are reproduced from the reconnaissance report :—

" Ranganathan's Working Plan prescribed a total closure of the whole of the Fuel Circle and amply justified it—*vide* paragraphs 571–575 of his Working Plan. As a result of representations of the Fodder and Grazing Committee, however, the period of 5 years closure was agreed to in about 1937. Such a closure however does not appear to be in the primary interests of either the grass or tree crop. Immediately after clear felling on area, there is a profuse growth of nutritious fodder grass mainly *Heteropogon controitus* which is very attractive, to cattle and this often leads to illicit grazing in closed coupes with the connivance of subordinates. Bovine cattle as a general rule prefer grass to leaves of any of our coppice Fuel Species excpt *Albezzia lebbeck* which forms a very small proportion of our fuel stands. All our fuel species produce viable seed only after the 10th year or so. Again closure during the first five years merely encourages a dense growth of weeds such as *colebrookea* and injurious creepers such as *Acacia intsia Pterolobium indicum*, etc., which often throttle, all coppice and seedling regeneration of valuable fuel species. It seems preferable in the interests of producing a better fuel stand and the maximum of good grazing to open all fuel coupes to grazing for the first 10 years including the year of felling and close them to grazing during the next 20 years of the rotation, so that natural regeneration of the stand during the latter period will be fostered to the maximum extent, the total elimination of grazing during this period being likely to create better conditions for the germinations of the seeds, as the soil will be less trampled by cattle and the young seedlings not subjected to destruction by trampling or browsing. Such a via media will accordingly be prescribed especially as it will be welcomed by the grazing interests ".

228. It was finally decided to give the new idea a trial over one or two areas. Accordingly, the Bennari East Series in Satyamangalam Range, is chosen for the experiment in view of its location facilitating constant inspection and enforcement of regulations. In this series, coupes will be open during the first 10 years including the year of felling and will be closed for the next 20 years. In all the other series, the existing prescription of closing the coupes only for first five years including the year of felling, will remain in force. In Bennari East Series the effect on the coppice and natural regeneration of fuel species and on the quality of grazing afforded will be assessed annually by the District Forest Officer in consultation with the State Silviculturist and a report submitted to the Chief Conservator of Forests.

229. All closed areas shall be clearly distinguished by fixing prominent notice boards, painted red. Easy access to grazing grounds beyond closed coupes shall be provided. If couple line are unsuitable, fenced paths through the coupe must be laid out.

230. *Fire protection.*—No special fire protection measures are suggested for the Fuel Working Circle.

231. *Supply of Agricultural implements.*—The contractor will be required under agreement to supply agricultural implements and small timber to ryots at rates prescribed by the District Forest Officer and embodied in the agreement. No effort shall be spared to ensure that ryots take advantage of this provision and that no obstacle comes in the way.

232. *Record of Statistics.*—Every contractor shall be required to furnish monthly accounts of removals of firewood and timber if any, from the coupes, not later than the 10th of the succeeding month. Such accounts should be supported by the counterfoils of all permits issued by him.

Bhavani Range.

Coupe number.	*Dodda-Kombai Fuel Series.*	*Attani Fuel Series.*	*Michael-palayam Fuel Series.*	*Enna-manga-lam Fuel Series.*	*Chinna-kombai Fuel Series.*	*Chennan patty Fuel Series.*	*Chenni-malai Fuel Series.*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	
I	64·00	70·00	29·00	69·20	64·40	77·00	56	Villikaradu Reserved Forest.
II	64·00	66·00	30·00	66·00	70·00	72·60	56	
III	62·00	69·20	29·20	67·20	70·00	70·80	55	
IV	57·20	70·40	30·00	64·00	69·60	70·80	56	
V	58·40	72·80	29·20	60·00	71·20	68·80	55	

Bhavani Range—cont.

Coupe number.	*Dodda-kombai Fuel Series.*	*Attani Fuel Series.*	*Michael-palayam Fuel Series.*	*Enna-manga-lam Fuel Series.*	*Cinna-kombai Fuel Series.*	*Chennan-patty Fuel Series.*	*Chenni-malai Fuel Series.*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	
VI	65·00	70·80	30·00	63·20	76·00	68·80	49	**Chennimalai Reserved Forest.**
VII	64·00	74·00	31·00	70·00	68·00	74·00	50	
VIII	62·40	69·20	30·00	65·60	75·60	72·00	52	
IX	59·20	68·00	30·00	68·80	75·20	70·00	50	
X	58·80	69·00	31·00	66·00	72·00	71·20	50	
XI	64·40	69·40	32·00	70·00	74·00	68·80	51	
XII	52·40	65·00	32·00	61·20	70·40	69·60	51	
XIII	60·00	71·00	30·00	64·00	68·00	76·80	52	
XIV	60·00	70·00	30·00	61·20	69·20	72·00	50	
XV	55·60	63·00	30·00	61·20	68·00	68·00	49	
XVI	58·40	66·00	32·00	60·00	71·20	72·00	50	
XVII	61·00	68·00	32·00	64·00	66·40	73·20	52	
XVIII	65·00	68·00	30·00	64·00	77·20	67·20	51	
XIX	65·00	69·20	34·00	68·00	74·40	70·00	51	
XX	65·00	72·00	32·00	64·00	74·00	66·00	52	
XXI	65·00	72·00	32·00	64·00	72·40	66·00	52	
XXII	64·40	68·00	32·00	60·00	75·20	65·20	52	
XXIII	53·20	72·00	38·80	65·20	74·80	68·40	52	
XXIV	52·00	66·80	38·00	62·40	75·60	70·40	52	
XXV	53·20	68·60	32·00	66·00	76·40	69·20	51	
XXVI	54·00	68·00	32·00	60·00	75·60	73·20	52	
XXVII	59·00	67·20	34·00	58·00	75·20	69·60	51	
XXVIII	52·00	68·40	34·00	60·00	71·60	66·80	52	
XXIX	52·00	66·00	42·00	64·40	70·00	70·00	51	
XXX	53·60	66·00	39·20	60·00	76·80	73·20	52	
	1,780·20	2,064·00	967·40	1,917·60	2,166·40	2,111·60	1,555·00	

	ACRES.
	1,780·20
	2,064·00
	967·40
	1,917·60
	2,166·40
	2,111·60
	1,555·00
Grand Total ..	12,562·20

Coupe number.	*Year of felling.*	*Athani Series.*	*Dhodda-combai Series.*	*Michael-palayam Series.*	*Enna-manga-lam Series.*	*Chinna-combai-Series.*	*Chennan-patty Series.*	*Chenni-malai Series.*
		ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.
I	1956–57	70·0	64·0	29·0	69·2	64·4	77·0	56·0
II	1957–58	66·0	64·0	30·0	66·0	70·0	72·6	56·0
III	1958–59	69·2	62·0	29·2	67·2	70·0	70·8	55·0
IV	1959–60	70·4	57·2	30·0	64·0	69·6	70·8	56·0
V	1960–61	72·8	58·4	29·2	60·0	71·2	68·8	55·0
VI	1961–62	70·8	65·0	30·0	63·2	76·0	68·8	49·0
VII	1962–63	74·0	64·0	31·0	70·0	68·0	74·0	50·0
VIII	1963–64	69·2	62·4	30·0	65·6	75·6	72·0	52·0
IX	1964–65	68·0	59·2	30·0	68·8	75·2	70·0	50·0
X	1965–66	69·0	58·8	31·0	66·0	72·0	71·2	50·0
XI	1966–67	69·4	64·4	32·0	70·0	74·0	68·8	51·0
XII	1967–68	65·0	52·4	32·0	61·2	70·4	69·6	51·0
XIII	1968–69	71·0	60·0	30·0	64·0	68·0	76·8	52·0
XIV	1969–70	70·0	60·0	30·0	61·2	69·2	72·0	50·0
XV	1970–71	63·0	55·6	30·0	61·2	68·0	68·9	49·0

Satyamangalam Range.

Coupe number. (1)	*Bennarai East.* (2)	*Kanavoi-Kombai.* (3)	*Satya-mangalam.* (4)	*Kempa-naicken-palayam.* (5)	*Kongara-palayam.* (6)	*Bungalow-pudur.* (7)	*Kanakkam-palayam.* (8)
	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.
I	60·00	92·00	68·00	66·00	54·00	60·00	68·80
II	60·00	104·00	73·30	58·00	54·00	64·00	80·00
III	56·00	103·80	66·00	51·00	55·60	61·60	76·00
IV	56·00	108·00	68·00	49·00	54·80	68·80	76·00
V	56·00	108·00	70·00	51·00	54·00	60·80	80·00
VI	56·00	103·20	70·00	51·00	54·00	60·00	80·00
VII	56·00	100·80	69·20	51·00	60·00	62·00	76·00
VIII	56·00	97·00	70·00	51·00	57·00	65·20	86·60
IX	57·00	99·20	72·00	50·00	50·00	68·00	76·00
X	56·00	105·60	71·20	48·00	52·00	68·00	74·00
XI	57·00	104·00	70·00	49·00	57·60	65·60	79·30
XII	60·00	107·20	70·00	49·02	55·20	66·80	78·00
XIII	56·00	104·00	70·00	49·00	56·00	62·80	74·00
XIV	56·00	104·00	70·00	48·00	56·80	69·60	82·00
XV	56·00	106·00	68·00	48·00	57·20	68·00	81·00
XVI	56·00	102·00	74·00	48·00	52·80	64·00	78·00
XVII	56·00	103·60	74·00	55·00	54·00	65·60	79·00
XVIII	56·00	107·20	72·00	51·00	58·80	64·00	75·00
XIX	64·00	106·00	72·00	52·00	58·40	64·80	82·00
XX	56·00	108·00	70·00	48·00	54·00	62·00	86·00
XXI	56·00	106·00	69·60	49·05	53·20	67·20	84·00
XXII	56·00	100·00	64·00	55·00	50·00	68·00	75·00
XXIII	62·00	99·00	64·80	55·00	58·00	66·80	72·00
XXIV	60·00	96·00	64·80	56·00	54·40	70·00	76·00
XXV	56·00	98·00	68·00	55·00	55·20	70·00	82·00
XXVI	65·00	102·00	64·00	55·00	52·00	65·20	86·00
XXVII	65·00	98·00	70·00	54·00	54·00	68·00	82·00
XXVIII	62·00	100·00	70·00	50·00	65·00	61·60	78·00
XXIX	62·00	103·00	70·00	58·00	60·00	60·80	78·00
XXX	62·00	97·60	72·00	58·00	60·00	68·80	84·00
	1,748·00	3,073·20	2,084·90	1,569·50	1,668·00	1,958·00	2,364·70

	ACRES.
	1,748·00
	3,073·20
	2,084·90
	1,569·50
	1,668·00
	1,958·00
	2,364·70
Grand Total ..	14,466·30

Satyamangalam Range—cont.

Coupe number.	*Year of felling.*	*Bennarai East Series.*	*Kanavoi Kombai Series.*	*Satyamangalam Series.*	*Kempanaickenpalayam Series.*	*Kongarpalayam Series.*	*Bungalowpudur Series.*	*Kanakampalayam Series.*
		Area in acres.	*Area in acres.*	*Area in Acres.*	*Area in acres.*	*Area in acres.*	*Area in acres.*	*Area in acres.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I	1956–57	60·0	92·0	68·0	66·0	54·0	60·0	68·8
II	1957–58	60·0	104·0	73·3	58·0	54·0	64·0	80·0
III	1958–59	56·0	103·8	66·0	51·0	55·6	61·6	76·0
IV	1959–60	56·0	108·0	68·0	49·0	54·8	68·8	76·0
V	1960–61	56·0	108·0	70·0	51·0	54·0	60·8	80·0
VI	1961–62	56·0	103·2	70·0	51·0	54·0	60·0	80·0
VII	1962–63	56·0	100·8	69·2	51·0	60·0	62·0	76·0
VIII	1963–64	56·0	97·0	70·0	51·0	57·0	65·2	86·6
IX	1964–65	57·0	99·2	72·0	50·0	50·0	68·0	76·0
X	1965–66	56·0	105·6	71·2	48·0	52·0	68·0	74·0
XI	1966–67	57·0	104·0	70·0	49·0	57·6	65·6	79·3
XII	1967–68	60·0	107·2	70·0	49·2	55·2	66·8	78·0
XIII	1968–69	56·0	104·0	70·0	49·0	56·0	62·8	74·0
XIV	1969–70	56·0	104·0	70·0	48·0	56·80	62·6	82·0
XV	1970–71	56·0	106·0	68·0	48·0	57·2	68·0	81·0

Mettupalayam Range.

Coupe number	*Year of felling.*	*Jakkanare Fuel Series.*	*Sundapatty Fuel Serils.*	*Kandiyur Fuel Series.*	*Tolampalayam Fuel Series.*	*Pettikuetai Fues Series.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		ACRES.	ACRES.	ACRES.	ACRES.	ACRES.
I	1956–57	42	49	36	86	100
II	1957–58	40	49	32	86	101
III	1958–59	37	59	37	88	98
IV	1959–60	37	54	37	88	103
V	1960–61	38	59	38	88	95
VI	1961–62	36	36	38	88	101
VII	1962–63	40	56	37	84	98
VIII	1963–64	38	53	31	88	102
IX	1964–65	41	54	40	85	97
X	1965–66	37	55	32	87	98
XI	1966–67	38	56	32	86	97
XII	1967–68	42	53	32	78	100
XIII	1968–69	40	54	32	78	102
XIV	1969–70	39	52	32	78	97
XV	1970–71	39	53	32	78	104

Talamalai Range.

Coupe number. (1)	Year of felling. (2)	Bennari West Fuel Series. (IN ACRES.) (3)	Pungar Fuel Series. (IN ACRES.) (4)	Kumbaragundi Fuel Series. (IN ACRES). (5)
I	1956–57	88	62	50
II	1957–58	81	62	48
III	1958–59	86	62	45
IV	1959–60	82	62	46
V	1960–61	80	54	50
VI	1961–62	88	62	50
VII	1962–63	85	59	51
VIII	1963–64	84	55	52
IX	1964–65	81	54	50
X	1965–66	84	60	50
XI	1966–67	81	61	52
XII	1967–68	83	54	48
XIII	1968–69	82	53	50
XIV	1969–70	82	60	49
XV	1970–71	88	62	49

CHAPTER V—WORKING PLAN FOR THE SHANAR POLLARD WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE AND CHARACTER OF THE VEGETATION.

233. *General constitution.*—The object of formation of this working circle is to meet the large seasonal demand for branchwood fuel from the Shanars engaged in the Palmyrah Jaggery Industry in Mathur, Marappalayam, Tiruppur and other adjoining villages of Bhavani taluk. The tapping season extends from January to June and is in full swing during March.

234. *Extent and division into felling series.*—Over a period of twenty-five years, the present system has worked more or less satisfactorily. It is felt necessary to extend the Working Circle by the addition of a fresh felling series in order to meet the demand for fuel from Reddipalayam, Moongipalayam and Murli villages lying east of the Reserve. The existing felling series is too remote for the Shanar women from these villages, to fetch their needs. They prefer to steal them from the nearest forest areas. Morever it is the common felling that the existing coupe is not quite adequate to meet the demand from the southern villages.

235. In these circumstances, the Working Circle is increased to 3,345 acres. Two felling series are constituted as follows :—

Name of the felling series and areas.

1. Mathur felling series—1,204 acres.
2. Murli felling series—1,276 acres.

The areas added on are very open scrub forests taken from the adjoining Chinnacombai and Chennampatti fuel series. Some fuel coupes of Chinnacombai worked last in 1941–42, 1942–43 and earlier are included in the Mathur series. The coppice growth is very poor and its average height is barely ten feet. Fuel coupe working is unlikely to be remunerative.

236. In addition, an area of 865 acres consisting of the concentrated Regeneration areas (Conservator's Plots) of 1953 and 1954, "Shanar" Kumaris raised between 1940 and 1947 and other kumri areas of 1950 is included in this Working Circle. It is proposed to regenerate the extensive failed patches in this area by the Kumri method.

237. *Character of the vegetation.*—The forest is an open stunded scrub and consists chiefly of the fuel species, *Albizzia amara, Asacia sundra, Dolichandrone falcata, Dichrostichys, cineria, Zizyphus, xlopyrus, Feronia elephantum, Choloroxylon Swietenia, Wrightia tinctoria, Azadirachta indica, Diospyrus montana, Canthium didymum.* In this forest of low height growth and poor size, good trees with pollardable shoots are not very common; the better grown trees are of *Dolichandrone falcata and Feronia elephandum chiefly.*

SECTION 2—METHOD OF TREATMENT.

238. *System.*—Lopping (with the preservation of the leading shoot or shoots of the trees in tact) will be the mode of working. Where the trees are not fit for lopping, the simple coppice system will apply.

239. *Felling cycle.*—The felling cycle is raised to twelve years. (12) Coupes of approximately equal extent are laid out in each of the two series.

SECTION 3—METHOD OF EXECUTING THE FELLINGS.

240. *Regulation of fellings.*—Only one coupe in each series may be worked every calendar year. It is recommended that instead of leasing out the coupe to a third party, the District Forest Officer shall make effort to lease out the annual coupe to local Jaggery Making Co-operative Society at such terms as may be prescribed by the Government or the Chief Conservator of Forests for leasing out to Co-operative Societies with a lease period of six months from first January to thirtieth June. In the event of such efforts proving abortive, removals may be on permits as hitherto, to be issued by a Forester who should be present in the coupe every morning except on Sundays and holidays from the beginning of January till the demand for firewood ceases or till the coupe has been completely worked.

241. *Laying out of coupe.*—The coupe to be worked during a six month period will be demarcated by six feet wide cut lines, by the preceding November.

SECTION 4—TABULAR STATEMENT OF FELLINGS.

242. The following statement shows the allotment of coupes to successive years :—

First Felling Cycle.

	Mathur Series.		***Murli Series.***	
	Cope No.	*Area in acrs.*	*Coupe No.*	*Area in acraes.*
1956–57	I	104	I	103
1957–58	II	104	II	107
1958–59	III	101.2	III	110
1959–60	IV	100	IV	110
1960–61	V	104·8	V	106
1961–62	VI	106.8	VI	105
1962–63	VII	106	VII	108
1963–64	VIII	110	VIII	112
1964–65	IX	107.2	IX	108
1965–66	X	103	X	111
1966–67	XI	108	XI	102
1967–68	XII	108	XII	106

Second Felling Cycle·

	Mathur Series.		***Murli series.***	
	Coupe No.	*Area.*	*Coupe No.*	*Area.*
1968–69	I		I	

and so on in sequence.

SECTION 5—SUBSIDIARY SILVICULTURAL REGULATIONS.

243. *Artificial regeneration.*—An area of 865 acres has been included in this Working Circle.

This consists of the following :—

(i) Shanar kumris of 1940–46—45.2 acres.

(ii) The failed kumris of 1947–51 in the Western bit—31.4 acres.

(iii) The partially successful kumris of 1947–51 in the eastern bit—277 acres.

(iv) The balance of areas excluded as unsuitable for artificial regeneration under the Second Working Plan.

244. The success of the small-scale kumri work during 1940–46 in this and adjoining localities in Bhavani Range led to the ambitious attempt of 1947–48, when a total area of 920 acres including (2) and (3) above was allotted to 225 persons. The attempt was a disastrous failure and Kumridas created no end of difficulty for the department, before they were finally evicted in 1951–53. The western bit of 314 acres (marked out for regeneration under the Second Plan) was quite bare of growth. Under the statewide scheme of Conservators plots, this area was taken up for regeneration during 1953 and 1954. The results are not very promising and extensive poor patches and blanks will need artificial restocking. Results will have to be assessed 3 or 4 years hence and the extent of failed area determined. In the eastern bit of 277 acres some patches (less than 100 acres in all) are well covered with the kumri species. Nearly (500) acres out of the area of 865 acres will thus be available for artificial regeneration.

245. *Mode of Regeneration.*—The Kumri method which has quite impressive successes to its credit in this Range will be revived, but on a modest scale, not more than 50 acres will be allotted for kumri every year, on a 3 year lease. The aim will be to obtain a series of 10, kumri plantations and work for faggotwood in the 11th year after planting. The tendency to embark on kumri work on a larger scale must be combated and it is essential to ensure the continued availability of area for kumri.

246. *Species.*—The species par excellence to be raised in these kumri will be the Palmyrah (*Borassus flabellifer*) though never before tried in the forest, the species has a high value locally and the Shanars pay as much as Re. 1 to Rs. 1-8-0 per tree anually, for tapping the juice for jaggery making. The palmyrah is not fastidious about any of its requirements and is not browsed or illicitly felled. As it is a common species in village lands there will be no difficulty in raising it. After 10 to 15 years lease of the trees will yield a handsome revenue. It is therefore prescribed that palmyrah will be raised at 22 feet by 22 feet in these kumris and between every two plants along the lines, the common fuel species, *Albizzia amara, Azadirachta indica, Acacias and Dolichandrone* species will be raised.

SECTION 6—OTHER REGULATIONS.

247. *Demarcation of Worked Coupes.*—Soon after the completion of fellings in a coupe, the boundaries of the coupe should be located on the ground by means of stone slabs planted at its corners. The slabs should show the number of the coupe worked, the year of felling, and the number of the adjoining coupe.

248. *Grazing Regulations.*—The worked coupes and regenartion areas will be closed to grazing for a period of five years after felling and planting respectively.

CHAPTER VI—WORKING PLAN FOR THE BAMBOO WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

249. *General constitution and area.*—The bamboo working circle consists of all the bamboo bearing areas of the division which can be worked at a profit and has a total area of 1,93,618 acres.

250. *Division into felling series.*—In the first working plan 19 commercial series and 6 village series were formed, the later being meant to meet the local demand in hill villages, too remote from the commercial series. While the agency of contractors was to be the

invariable rule in the commercial series, exploitation by issue of permits was permitted in the village series, whenever the lease system was not possible. In practical, however, there has been no distinction. Seldom was the permit system found necessary and if in rare instances it was introduced as in 1941–42 (over most felling series in Satyamangalam and Talamalai ranges) it was applied to both sections, with the sanction of the territorial Conservator. The distinction into the two sections was given up in the last plan and it is not considered necessary to revive it here.

251. While the distinction was omitted in the last plan the number of felling series was however retained intact and two series transferred to Mettupalayam Range from Coonoor Range (viz., Burliar and Aduthorai series) were added on, to make up a total of 27 felling series for the division. Several of these series are small and the practice of selling several of the year's coupes in a range as one unit has often been adopted. Especially was this the case in Mettupalayam Range, where all the eight coupes were sold as one unit (sometimes along with two coupes of Coonoor Range also) for a continuous period of nine years, from 1940–41 to 1948–49. Such a procedure is very undesirable and has been adversely commented upon in the Conservator's field inspection notes of 1949. The number of felling series is now reduced from 27 to 19 and the following statement gives the details.

Bamboo Working Circle—Statement of felling series.

Serial number and name of the felling series. (1)	*Name of the reserve or reserves in which the series is located.* (2)	*Boundaries.* (3)
		Satyamangalam Range.
1 Kanakampalayam	Guthiyalathur	*North.*—By the ridge continuing north-east from Yeggarai Boli 4,749 to the Gundrimadapatti footpath near 3,910. Then the footpath up to Range boundary. *East.*—By Range boundary. *South.*—The Northern boundary of Kanakampalayam fuel series up to Vedaparai; thence along Vedaparai Gundri footpath for about 40 chains to the boundary of Kanakampalayan fuel series; thence the northern boundary of Kanakampalayam and Bungalowpudur fuel series upto stream from 2,990 near Yedakanji. Then up the stream via 1,460 up to Yedakanji enclosure boundary : thence south-west wards along the enclosure line until it meets Yedakanji, Bangarapoli malai footpath. *West.*—Footpath from Yedakanji to Bangarapoli malai and thence the ridge along 3440, 3375, 3400, 3435, 3166 (Manikaraimalai) 3080, 3500, 4333, (Perumalsami) 4569 (Egganaimalai) to 4749. Yeggarai Boli.
2 Velancombai	Guthiyalathur	*North.*—By Kalkadambur—Anjenai footpath. Then Anjanai Kurumbur footpath till it meets Gundri Kurumbur footpath. Then Gundri Kurumbur footpath. *East.*—Gundri enclosure western and southern line : Alaraipallam and Gundripalam till it meets the footpath from Gundri to Maritakelu. Then this footpath. *South and west*. .—Footpath from Manitakelu to Kalkadambur (via) Urugalamalai and Orugamalai Kuttai near (3820) upto the Guthiyalathur enclosure line ; thence the enclosure line upto Kalkadambur Anjanai footpath.
3 Kempanaickenpalayam	Guthiyalathur	*North.*—By Guthiyalathur enclosure boundary. *East.*—Kalkadambur—Orugamalai footpath ; thence Orugamalai Palayur footpath up to Madayankoil—thence along ridge 4557–4797 to 4892 on the Periya Durgam enclosure boundary ; thence the western boundary of the said enclosure upto footpath from Peroya Durgam to Kongarpalayam ; thence the said path (via) hills 3967, 3820 and Chinna Durgam to Guthiyalathur Reserve Forest boundary. *South.*—Guthiyalathur Reserve Forest Boundary. *West.*—Footpath from Satyamangalam to Melur (or Yekkathur) (via) Mamarakombai.
4 Guddayur (Portion) i.e. Coupe I	Barbetta	*North, East and South.*—Barbetta Reserved Forest Boundary. *West.*—Footpath from Athiyur to Yekkathur.
5 Guddayur portion i.e. Coupe II and III.	Guthiyalathur	*North.*—By Kurumbur enclosure—Halur halla and Arigiam enclosure upto ridge near 2490. *East.*—By ridges 2490–2530 Kottaiguru (3170) up to the footpath from Kurumbur to Anjanai; thence the said path to Anjanai. *South.*—Anjanai—Kalkadambur footpath. *West.*—Guthiyalathur enclosure line and footpath from Salhatti to Mosalaimaduvu.

Bamboo Working Circle—Statement of felling series—cont.

Serial number and name of the felling series. (1)	*Name of the reserve or reserves in which the series is located.* (2)	*Boundaries.* (3)
		Satyamangalam Range—cont.
6 Hassanur (portion) i.e. Coupe I and III.	Guthiyalathur and Thalamalai	*North.*—Footpath from Salaikarai to Satyamangalam Chamranagar road; thence the said path road to Karaipalayam; thence tne division boundary up to hill near Bidiguli Betta *East.*—By ridge from Bidiguli Betta to Bedan Betta ridge (5117) and thence to Doddabeddar Betta (4085) thence along the ridge and Kodambairai halla till it reaches the Michiguli halla thence west wards along the said halla, for about 2 furlongs, thence south wards along Thattai halla up to ridge 4640; thence along the stream from ridge 4640 to Mavanafai halla just below hill 3230; thence up the stream to Aiyangiribetta (5293) thence along ridge 5311 (Doddabedda) 4891 Uppukerai Betta, 4290, 4257, 4200, 3960, 3660, 3981 (Kadakatti Mokkai), 3920–3950 and 4001 to Dhimbam–Kottaidai road. *South.*—Kodadai–Dhimbam road and Dhimbam–Talamalai road. *West.*—By Gali Dhimbam—Alamalai doddi footpath. Thence along ridge 4010, Mathankal Betta, 3960, 3910, 3990, 3960, Manjigumma Betta (4203), 3890, Sulaikeria Betta and 3820 to Sulaikarai footpath.
Hassanur portion in Coupe II	Guthiyalathur	*North.*—Along the Guthiyalathur enclosure line, starting from the point where Chikkarasampalayam—Yekkathur footpath meets it near 2770 upto Karadiguddai (3430) North-West Corner of Kempanaickenpalayam bamboo Coupe I. ***East.***—By Western boundary of Kembalanaickenpalayam Bamboo Coupe I. *South.*—By Guthiyalathur Reserve line. ***West.***—Cickarasampalayam—Yekkathur footpath (via) Kakarai (2890) till it meets the Guthiyalathur enclosure boundary near 2770.
7 Gundri West series	Guthiyalathur	*North.*—Halur halla and upto the streamlet joining hallur halla from ridge 2791, thence stream from 2791 (Thatta halla) upto footpath from Gujjanpalayam to Makkampalayam. ***East.***—Footpath from Makkampalayam to Gujjanpalayam and western boundary of Gundri enclosure. *South.*—Footpath from Chinna Gundri to Kurumbur (via) 2600 till it meets the stream from 3438 Huli barai. ***West.***—Thence along ridge 3170 (Kottai Gumma) and 2530, 2490 and along western boundary of Arigiam enclosure upto Halur halla.
8 Gundri East series	Guthiyalathur	*North.*—From line joining 1900 on the Makkampalayam—Gujjanpalayam footpath to ridge 2760; thence down the stream from 2760 to Bellanattur halla and thence the said halla to Palar. ***East.***—Palar, i.e., Range boundary. *South.*—Footpath from Madapatti to Gundri till it meets Jotimaduvu pallam a few chains north west or Jadayaswami koil. Thence Jotimaduvupallam upto Alarai pallam.

		West.—Thence along Alarai pallam and the southern, eastern and northern boundary of Aniganattam enclosure and eastern boundary of Gundri enclosure to footpath from Gujjanpalayam to Makkampalayam ; thence the said path upto hill 1900.
8 Yekkathur (portion) (4) B.C. 1.	**Barbetta Reserve Forest**	*North.*—Barbetta reserve boundary. *East.*—Barbetta reserved Forest boundary and Yekkathur—Athiyur footpath. *South and West.*—Barbetta Reserve boundary.
Yekkathur (portion) i.e., Coupe II and III.	**Guthiyalathur and Ullaipalayam** ..	*North.*—By southern Kadahatti enclosure line and the footpath from Kadahatti to Diggarai to meet the Diggarai enclosure line. *East.*—Diggarai and Anaikarai enclosure line up to hill 2798; thence the halla from 2789 to Aleru halla. *South.*—Aleru halla and Guthiyalathur enclosure line; footpath from Karalia to Odamandai till it meets the stream Nellikadu pallam. *West.*—Thence down the Nellikadupallam to a point about 2 furlongs north of hill 2960; thence along the ridge 3120 to Ullepalayam Reserved Forest line, thence the said Reserved Forest line ; thence southern and eastern boundary of Ullepalayam enclosure and footpath from Ullepalayam to Kadahatti (via) Jadaikadavukinaru.
9 Germalam Part (Coupes I and II).	**Guthiyalathur**	*North.*—Division boundary. *East.*—Northern and western boundaries of Kadahatti enclosure up to its junction with footpath from Kadahalli to Ullepalayam (via Jadaikadavu kinaru) ; thence the said path upto Ullepalayam enclosure boundary. *South.*—Thence along the northern and western boundaries of Ullepalayam Reserved Forest and part of the western boundary of Ullepalayam ; Reserved Forest and along ridge 3120 to Nellikadu pallam ; thence up the said pallam to the hill from where Bethumed halla takes its origin ; thence Bethummand halla. *West.*—Thence along the same halla (via) hill 4230 and 4660 ; thence down the halla from 4660 to the footpath from Mavahalla to Germalam ; thence the said path to the southern boundary of Germalam enclosure; thence the southern, eastern and northern boundaries of the said enclosure to Hassanur—Kollegal road ; thence the said road to the division; boundary.
Germalam B.S. Part, Coupe III ..	**Guthiyalathur**	*North.*—By Kadahatti enclosure boundary and thence to ridge 3190. *East.*—Along ridge 3500, Adda betta 3455— and thence to Mayathakave Bettathu halla thence down the said halla to the footpath from Kottaimalam to Arigiam ; thence the said path till it meets Kadahatti Arigiam footpath. *South and west.*—Thence footpath from Arigiam to Kadahatti ; thence northern boundary of Diggarai enclosure ; thence along footpath from Diggarai to Kadahatti ; thence southern boundary of Kadahatti enclosure.
		Talamalai Range.
10 Chickalli	**Talamalai**	*North.*—By Division boundary. *East.*—By Division boundary ; from Doddanai betta along ridge 4312—4200, 3375, to Balapadugu Hassanur footpath ; thence the said path (via) hill 2950 and along Kontikal Betta footpath and ridges 3450, 3780 and 3860.

Bamboo Working Circle—Statement of felling series—cont.

Serial number and name of the felling series. (1)	*Name of the reserve or reserves in which the series is located.* (2)	*Boundaries.* (3)
		***Talamalai Range*—cont.**
		South.—Along ridge 3960 near Munikerai—Biran Batta (4316); thence stream from Biran batta to footpath; from Basava gowda kuttai to Higgalur; thence the said path Higgalur enclosure line. *West.*—Thence Higgalur enclosure line to a place near hill 2730 where the enclosure line meets Halbiddahalla; thence the said halla to the Talamalai Reserved Forest boundary; thence along the said boundary to division boundary.
11 Kodamballi	Talamalai	*North.*—By Chickalli enclosure boundary and Higgalur—Basavagowda kuttai footpath. *East.*—Ridge along hills 2880, 3560, 3710, 3929 (Karigarai betta) and 3670; thence stream from 3670 to Kodamballi halla up to Kodamballi halla; thence Kodamballi halla; thence ridges 3888—4353, 4300 to 4054 (Karubarai betta). *South.*—Senthi Stream from 4054 (Karabarai betta) and Talamalai enclosure line. *West.*—Footpath from Talamalai to Kodamballi (via) hills 2880, 2850 and 2870, thence Neithalapuram enclosure line at Kodamballi halla and Joghathi halla.
		Bhavani Range.
12 Athani	South Bargur	*North.*—By Gundri Doddakombai footpath and the streamlet flowing south from 3560; thence ridge 3560, 4330, 4490, thence stream from 4490 to Mapillaigundu pallam thence Mapillaigundupallam upwards upto stream from 4574 (Aiyppasamimalai) thence the said stream to 4574, thence along 4290, 4300, 3940, 4390, 3390, up to footpath from Kongadai to Michaelpalayam near Mavalathuratti. *East.*—Thence the said footpath from Kongadai to Michaelpalayam up to its junctionwith Mangil pattipallam; thence the said pallam and South Bargur Reserved Forest line to Senthallikaradu. *South.*—Thence Reserved Forest line and foot path from Karumparai to Doddakombai upto Mapillai Gundu pallam, thence down Mapillai gundu pallam upto the junction of the stream from 3723 (Varaikalamalai). *West.*—By range boundary.
13 Kinathadi	South Bargur	*North.*—Ridge from 4030 to Bolarai Guddai and thence along the streamlet from Bolarai Gundai to Varattupallam (via) 2370 and Varattupallam. *East.*—Reserved Forest line. *South.*—Mungilpathipallam. *West.*—Mungilpattipallam and footpath from Michaelpalayam to Kongadai up to the point where the said footpath joins Girumalai (4090), Kongadai footpath near hill 3820, thence along Kongadai—Girimalai (4090) footpath for about 16 chains to the point where the path from Jadayasivan koil meets; thence along the path to Jadayaswami koil for about 6 chains still it meets the stream from Soraihatti; thence the said stream to Soraihatti. thence footpath from Soraihatti to Talakarai, thence ridge to 4030 near Bolarai Guddai.

14 **Varattupallam**	**South Bargur**	*North.*—Northern boundary of South Bargur Reserved Forest (also division boundary). *East.*—South Bargur Reserved Forest boundary and footpath from Ondanai to 2570 (Malleshwarankoil). *South.*—Stream from 2570 (Malleshvarankoil)to Varattupallam; thence up the Varattupallam upto the junction of the stream coming from Karadigumma (4410); thence upto the stream coming from Karadigumma (4410). *West.*—Stream from Karadigumma (4410) to Varattupallam to ridge Karadigumma (4410), thence stream from Karadigumma (4410) to Northern boundary of South Bargur Reserved Forest.
15 **Matam**	**South Bargur and Ennamangalam Reserved Forest.**	*North.*—By Range boundary. *East.*—Boundary between South Bargur and Ennamangalam Reserved Forests upto 1002. *South.*—By ridges along hills 1002, 1610, 2837 (Kokkikal) 2987 (Nasuvankal), 2430, 1359 (Makal Karadu) and 1100 to Valukuparaipallam, thence the said pallam and koilpallam and southern boundary of Ennamangalam Reserved Forest. *West.*—Chinna Valukuparaipallam and stream from 2570 (Malleshvarankoil) and ridge, thence footpath Ondanai to Malleshvarankoil and range boundary.

Mettupalayam Range.

16 **Hulical (portion) (Coupe I)**	**Pillur slopes and Nellithorai Reserved Forest.**	The catchment areas of Chengalpallam, Pillurpallam and Kadambakombaipallam.
Hulical (portion) (Coupes) II and III).	**Hulical drug**	*North.*—By Coonoorpallam. *East and south.*—Reserved Forest boundary between Hulical drug Reserved Forest and Nellithorai Reserved Forest. *West.*—Stream from Ponnaraikombai joining Bhavani river near Sattayur and division boundary (also Revenue District boundary).
17 Kallar	Hadathorai and Kallar	*North.*—By Hadathorai halla. *East.*—By Hadathorai halla and Kallar Reserved Forest boundary. *South.*—By Coonoorpallam (which is also the boundary of Kallar Reserved Forest). *West.*—By Division boundary.
18 Jaccanari	Jaccanari slopes Reserved Forest and Kallar Reserved Forest.	Entire Jaccanari slopes Reserved Forest and entire part of Kallar Reserved Forest lying within Coimbatore North Division.
19 Ullivur (portion) (Coupes I-A, II and III).	Nilgiris Eastern Slopes Reserved Forest.	*North.*—By Division boundary and ridge to Yemmehatti betta (3587) thence Yemmehatti bettavellamundi chatram footpath, upto deviation of footpath to Patramangalam. *East.*—Yemmehatti Betta—Patramangalam footpath to 1610, thence along ridge to hill Arasan Mokkai (2430), thence stream to Jattipallam (via) 1140 and 1020. *South.*—Up the Jattipallam and footpath to Allur, along the footpath upto Halur halla, thence Halur halla. *West.*—By Division boundary.

Bomboo Working Circle—Statement of series—cont.

Serial number and name of the felling series. (1)	*Name of the reserve or reserves in which the series is located.* (2)	*Boundaries.* (3)
	Mettupalayam Range—cont.	
Ulliyur (portion) (Coupe I) ..	Nilgiris eastern slopes	*North.*—By Upperpallam (via) 2340 and 1170. *East.*—Stream from a hill between 1570 and 1770 flowing west of Marigudi. *South.*—Footpath from Pudur to Patramangalam (via) 2500 and 1770. *West.*—By Division boundary.

SECTION 2—METHOD OF TREATMENT.

252. The system of management is incapable of being described by any of the known silvicultural systems. The regulation of working will be by area.

253. *Felling cycle.*—A felling cycle of 3 years will be adopted. Natural features have been generally adopted in fixing the boundaries of coupes.

254. *Agency of fellings.*—The agency of fellings will invariably be contractors in all cases.

255. *Period of contract.*—Triennial leases of each series as a whole were discontinued from 1948 on the orders of Chief Conservator of Forests (*vide* Conservator's field inspection notes of 1959) and annual leases introduced. This will be continued and the official year will be the period of contract.

256. *Sale units.*—Each coupe will be a sale unit. The unwholesome practice of clubbing several coupes in a range will be avoided as far as possible. Where a coupe fails to evoke any demand, no purpose is served by tacking it on to other coupes. It is much better to consider the unit unsaleable for the year.

SECTION 3—METHOD OF EXECUTING THE FELLING.

257. *Felling rules.*—The following felling rules are laid down :—

(1) A minimum of six mature culms shall be left in each clump, a culm will be considered mature if it is at least one year old.

(2) No culm which is less than a year old will be felled.

(3) No culm shall be removed with the rhizome.

(4) Culm should be cut clean and as low as possible between the first and the second modes from the ground.

(5) Fellings shall be made as far as possible on the side of the clump opposite to that from which the largest number of new culms occur.

258. *Enforcement of rules.*—The fellings rules mentioned are silviculturally sound and should be enforced strictly to ensure the longevity of the clumps. This is specially necessary as North Coimbatore bamboos will play a very large part in the paper industry proposed to be organised in the tract. Ordinarily the contractor fells and moves all saleable culms and leaves the rest. Culms are often cut high, over 15 feet high sometimes. The result is that a mass of dead stumps collect in the clump and effectively impede low cutting, so that high cutting becomes inevitable thereafter until the clump becomes badly conjested. All these practices lead to repaid deterioration of the clumps. Penalties are occasionally imposed no doubt, but do not deter the lessees, accustomed to the general and long continued indifference of the staff to the enforcement of the felling rules. It is therefore very essential that bamboo exploitation receives closer personal attention from the Range staff who should devote time systematically at the beginning of each lease period to impress upon the contractor's labour the necessity for observing the rules, in their own interest.

SECTION 4—TABULAR STATEMENT OF FELLINGS.

259. The areas and boundaries of the coupes in each felling series are described in the following statements. If a coupe remains unsold after the general sale (or sales) of bamboo coupes, persistent efforts should be made to sell the coupe during that year. The sequence of fellings shall be maintained in all cases. In consequence of the reconstitution of felling series in the division, the prescriptions will in some cases, cause some inevitable dislocation in the first felling cycle but woring will bke normal from the second felling cycle onwards. But more important than anything else is the need to ensure that the contractor keeps strictly within the limit of the year's coupe.

SECTION 5—OTHER REGULATIONS.

260. *Grazing.*—No restriction of grazing is proposed except such closures as prescribed under other chapters.

261. *Fire protection.*—No special measures of fire protection are feasible for this working circle.

262. *Record of statistics.*—The contractor will furnish an account of all removals of different classes of bamboos every month. A statement showing current prices of the various classes should be furnished with the account of removals. Some measure of check should be exercised by the Range Officer over the correctness of these two statements.

Bamboo Working Circle—Statement of Coupes.

Serial number and name of the felling series. (1)	*Coupe number.* (2)	*Total area in acres.* (3)	*Boundaries.* (4)
1 Kanakampalayam	I	2,291	*North.*—By Gundri—Madappatti footpath. *East.*—Range boundary. *South.*—Northern boundary of Kanakampalayam fuel series. *West.*—Northern boundary of Kanakampalayam fuel series up to Vedaparai; thence along Vedaparai Gundri. Footpath for about 40 chains to the northern boundary of Kanakampalayam fuel series; thence that boundary until it meets Vedaparai Gundri footpath (via Madheswari) again; thence that footpath along ridge 1900 2770, 3340, and 3710 Gundri Madappatty footpath.
	II	3,417	*North.*—By Yeggarai Boli (4749) ridge along 4390—3910 to Gundri Madappatti footpath. *East.*—Western boundary of Kanakampalayam Bamboo Coupe I. *South.*—Kanakampalayam fuel series limit up to footpath from Punjaithorayanpalayam to Keelamanikarai; thence along the footpath from Punjaithorayanpalayam to Kumbanur via Keelamanikarai and Melamanikarai till it meets footpath from Kongarpalayam, i.e., the series boundary. *West.*—Ridge along 3166 (Manikaraimalai) 3080—3500—4333 (Perumalswamy) 4569 Yeggaraimalai) 4749 (Yeggarai boli) 4390 and 3910 to Gundri Madapatti footpath.
	III	1,162	*North and east.*—Southern boundary of Kanakampalayam Bamboo Coupe II. *South.*—Northern boundary of Bungalowpudur and Kanakampalayam fuel series thence up to the stream from 2990 to Bungalowpudur fuel series via 1460 till it meets Yedakanji enclosure boundary; thence south westwards along the enclosure boundary till it meets Yedakanji Bangapali Malai footpath. *West.*—Footpath from Yedakanji via 2990, 3325 Bungarpali malai 3440—3375—3400 and 3435 up to the southern boundary of Kanakampalayam Bamboo Coupe II.
2 Velancombai	I	1,411	*North.*—Urugumalai kuttai (near 3820) Anjalai footpath up to the junction of stream running through 2670 and the said path a few chains north of hill 3390; thence the said stream to Koluthupallam. *East.*—Kalathupallam—Gundri pallam. Till it crosses the footpath from Periya Gundri to Maritakelu; thence the said path up to Maritakelu. *South and west.*—Maritakelu Kalkadambur footpath via Urugumalai up to Urugumalai kuttai near 3820.
	II	1,445	*North.*—By Kalkadambur—Anjanai footpath up to Anjanai. *East.*—Footpath from Anjanai to Velancombai, which runs adjacent to Kolathupallam. *South.*—Northern boundary of Velancombai coupe I and footpath from Urugumalai kuttai near 3820 to Kalkadambur. *West.*—Guthiyalathur enclosure line

Bamboo Working Circle—Statement of Coupes—cont.

Serial number and name of the felling series. (1)	*Coupe number.* (2)	*Total area in acres.* (3)	*Boundaries.* (4)
	III	2,244	*North.*—By Kurumbur—Gundri footpath. *East.*—Gundri enclosure line and Alaraipallam. *South.*—Gundripallam. *West.*—Eastern boundary of Velancombai coupes I and II up to Anjanai and footpath from Anjanai to Kurumbur.
3 **Kempanaickenpalayam**	I	3,694	*North.*—By Guthiyalathur Reserved enclosure line. *East.*—Footpath from Athiyur to Kempanaickenpalayam. *South.*—By Guthiyalathur Reserved Forest boundary. *West.*—Footpath from Satyamangalam to Molur via Mamarakombai.
	II	2,416	*North.*—By Guthiyalathur enclosure line. *East.*—Kempanaickenpalayam—Yekkathur road.
3 Kempanaickenpalayam	II	..	*South.*—Guthiyalathur Reserved Forest boundary. . *West.*—Eastern boundary of coupe I.
	III	3,984	*North.*—By Guthiyalathur enclosure boundary and Kalkadambur—Urugumalai footpath via Urugumalaikuttai. *East.*—Urugumalai Palayam footpath up to Madayankoil; thence along ridge 4547 and 4797 to 4892 on Periyadurgam enclosure boundary; thence the western boundary of the said enclosure up to footpath from Periadurgam to Kongarpalayam; thence the said path via hills 3967, 3820 and Chinnadurgam to Guthiyalathur Reserved Forest boundary. *South.*—Guthiyalathur Reserved Forest boundary. *West.*—Eastern boundary of coupe II.
4 **Guddayur**	I	1,211	*North, east and south.*—Baranbetta Reserved Forest boundary. *West.*—Footpath from Athiyur to Yekkathur.
	II	1,542	*North.*—By Kurumbur enclosure boundary and hallur halla. *East.*—Rangasamypallam up to the footpath from Guthiyalathur to Salahalli via Madheswaran Gudi and Guddaiyur; thence the said path. *South.*—By Guthiyalathur enclosure boundary. **West.—By Salhatti Mosali Madavu footpath.**
	III	2,524	*North.*—By Haleur halla—Arigiem enclosure line. *East.*—By ridges 2490—2530 Kottar Gumma (3170) rdge till it meets **Kurumbur-Anjanai** footpath; thence the footpath to Anjanai. *South.*—Anjanai Kalkadambur footpath. *West.*—Guthiyalathur enclosure line and the eastern boundary of Guddayur Coupe II.
5 **Hassanur**	I	14,626	*North.*—By Mysore boundary. *East.*—By ridge from Bidiguli betta to Bedan betta ridge (5117) and thence to Dodda Koladarai betta (4935); thence along the ridge and Kodabarai till its meets the Minchiguli halla; thence westwards along the said halla for about two furlongs, then southwards along the thattai halla upto ridge 4640; thence along the stream from ridge 4640 to Mavanarai halla just below hill 4230; thence up the streams to Aiyangiri betta (5293); thence along ridge 5311 (Doddabetta) 4891 (Uppukorai betta) 4290, 4257, 4200, 3960, 3660, 3081 (Kadahalli mokkai) 3920, 3950 and 4001 to Dhimbam—Kottadai road. *South.*—By Kottadai—Dhimbam road. *West.*—Chamrajnagar Ghat road and Mysore State boundary.
	II	12,296	*North.*—Along Guthiyalathur enclosure line starting from the point where Chickarasampalayam Yekkathur footpath meets it near 2770 upto Karadiguddai (3430). *East.*—By westernboundary of Kempanaickenpalayam B.C.I. *South.*—By Guthiyalathur Reserved Forest boundary. *West.*—Chickarasampalayam—Yekkathur footpath (via) Kakarai (2890) till it meets the Guthiyalathur enclosure line near 2770.
	III	6,936	*North.*—Footpath from Sulaikerai to Satyamangalam—Chamrajnagar road. *East.*—By Chamrajnagar—Dhimbam ghat road. *South.*—By Dhimbam—Talamalai road. *West.*—By Galidhimbam—Alamalaidoddi footpath—thence along ridge 4010—Mathankal betta, 3960—3910—3990, 3960, Manjugumma betta (4203) 3890, Sulaikerai betta and 3820—to Sulaikerai footpath.
6 **Germalam**	I	8,964	*North and east.*—By Division boundary of Coimbatore North Division. *South.*—By northern boundary of Kadahalli enclosure line connecting Kadahalli and Germalam enclosure lines along ridge Ethenora betta (4213) thence eastern and northern boundaries of Germalam enclosure. *West.*—Road from Hassanur to Kollegal.
	II	12,333	*North.*—By southern boundary of Germalam enclosure then ridge along 4213 (Ethenora betta) to Kadahatti enclosure boundary. *East.*—Western boundary of Kadahatti enclosure—thence footpath from Kadabatti to Ullepalayam (via) Jadaikadavu kinaru to meet Ullepalayam enclosure line. *South.*—By Ullepalayam enclosure line and Ullepalayam Reserved Forest line; thence along the ridge 3120 to Hellikadu pallam; thence up the Pallam to the hillock where Betmund halla; thence along Betmundhalla. *West.*—Along Betmundhall (via) 4230 upto 4660; thence down the halla from 4660 footpath from Mavahalla to Germalam; thence along the said footpath to the southern boundary of Germalam enclosure.

Bamboo Working Circle—Statement of Coupes—cont.

Serial number and name of the felling series. (1)	*Coupe number.* (2)	*Total area in acres.* (3)	*Boundaries.* (4)
	III	5,368	*North.*—By Kadahatti enclosure line and thence to ridge 3190. *East.*—Along the ridge 3500, Adda Betta 3455 and thence to Mayathakane bettathu halla; thence down the halla to the footpath from Kottaimalam to Arigiam; thence the footpath till it meets Kadahatti Arigiam footpath. *South and west.*—Thence footpath from Arigiam to Kadahatti; thence northern boundary of Diggarai enclosure—thence along the footpath from Diggarai to Kadahatti; thence southern boundary of Kadahatti enclosure.
7 Gundri, East	I	2,916	*North.*—Line joining 1900 on Gujjanpalayam—Makkampalayam footpath and ridge 2760; thence down the stream from 2760 to Bellanathur halla; thence the said halla to Pala ; thence Palar (i.e., Range boundary). *East.*—Palar upto Ethugadatti Basareshwaran koil; thence along ridge 3100—Joginari-malai—3170, 3080—Joginari Betta, 3340 and footpath from Madheshwaran koil to Gujjanpalayam. *South.*—Gundri enclosure line. *West.*—Footpath from Gujjanpalayam to Makkampalayam upto 1900.
	II	4,616	*North.*—Eastern boundary of Gundri East Coupe I and Palar. *East.*—Range boundary upto Golikerai Guddai. *South.*—Thence a straight line from Golikerai Guddai to 2940 and thence along stream from 4229 (Budibaraibetta); thence straight line to the northern most corner of Ariganatham enclosure and thence the said enclosure line. *West.*—Gundri enclosure line and eastern boundary of Gundri East Coupe I.
	III	1,780	*North.*—Southern boundary of Gundri East Coupe II. *East.*—Range boundary. *South.*—Madapatti—Gundri footpath till its meets Jotimaduvu pallam a few chains; north-west of Jadayaswamy Koil and thence along the above pallam to alarai pallam. *West.*—Alarai pallam and Ariganatham enclosure line.
8 Gundri, West	I	952	*North.*—Makkampalayam —Gujjanpalayam footpath from the junction of Arigiam—Gundri footpath to Gundri enclosure line. *East*—Western boundary of Gundri enclosure. *South*—Gundri—Kurumbur footpath as far as the down hill ridge from Kurimanthai Hanai (3330). *West.*—From the above said point to ridge 3090—3330] (Kurimanthai Hanai) 3438 (Huli Barai) and along the ridge to the starting point.
	II	[illegible]	*North.*—The stream from Halurhalla to Kurimanthai Hanai (3330). *East.*—Western boundary of Gundri West Bamboo Coupe I. *South.*—Gundri—Kurumbur footpath till it meets the stream from 3438 (Huli Barai). *West.*—Along ridge 3170 (Kottai Gumma) 2530—2490 and along the eastern boundary of Arigiam enclosure to the starting point.
	III	660	*North.*—By the tributory to Hallur halla from ridge 2791; thence stream (Thatta halla) from 2791 up to Gujjanpalayam—Makkampalayam footpath. *East.*—Makkampalayam—Gujjanpalayam footpath till it meets Gujjanpalayam—Arigiam footpath and western boundary of Gundri West Bamboo Coupe I. *South.*—Northern boundary of Gundri West Bamboo Coupe II. *West.*—Arigiam enclosure line and Hallur halla.
9 Yekkathur	I	1,742	*North.*—Barbetta reserve boundary. *East and South.*—Barbetta Reserved forest boundary and Yekkathur—Athiyur footpath. *West.*—Barbetta Reserved Forest boundary.
	II	4,756	*North.*—Along the southern boundary of Kedahatti enclosure and footpath from Kadahatti to Diggarai. *East.*—Western boundary of Diggarai enclosure and halla from 2789 to Aleru halla. *South.*—By Aleru halla and Guthiyalathur enclosure line and along the footpath from Yekkathur till it meets Ullepalayam enclosure line. *West.*—Along the footpath from Ullepalayam to Kadahatti (via) Jadaikadavu Kinaru.
	III	6,473	*North.*—By Ullepalayam enclosure line and the footpath from Ullepalayam enclosure line to Yekkathur. *East.*—By Guthiyalathur enclosure line. *South.*—Guthiyalathur enclosure line and footpath from Karaia to Odamandai till it meets the Nellikadupallam. *West.*—Thence down Nellikadupallam to a point about two furlongs north of hill 2960; thence along the ridge 3120 to the Guthiyalathur Reserve Forest boundary; thence the said boundary.
10 Chickalli	I	2,929	*North.*—By Balapadagu—Hassanur footpath. *East.*—Balapadagu—Kontikal Betta footpath and along ridge 3450, 3780 and 3960 near Munikerai. *South.*—Ridge 3960— 4316 (Biranbetta) and stream from Biranbetta flowing north of Basra Gowda kuttai and footpath from Basuvagoundan kuttai to Higgalur. *West.*—Higgalur enclosure line.
	II	2,327	*North.*—By division boundary. *East.*—Division boundary from Doddanai betta along ridge 4312—4200—3375 to Hassanur—Balapadagu footpath. *South and West.*—Hassanur—Balapadagu footpath and by ridge 3894 (Sathanarada Betta and Balapadagu halla flowing towards Makampalayam).

Bamboo Working Circle—Statement of Coupes.

Serial number and name of the felling series. (1)	*Coupe number.* (2)	*Total area in acres.* (3)	*Boundaries.* (4)
10 Chickalli—*cont.*	III	5,328	*North.*—By the Division boundary. *East.*—By the Division boundary and western boundary of Chickalli Bamboo Coupe II. *South and West.*—Hassanur—Balapadagu footpath and Chickalli enclosure line and Balapadagu halla and Halbidda halla and Talamalai Reserved Forest Boundary.
11 Kodamballi	I	1,693	*North.*—By Chickalli enclosure boundary. *East.*—Higgalur—Basavagowda Kuttai footpath and along ridge 2880, 3560–3710 to Karigarai Betta (3929). *South.*—Stream from 3929 Karigarai Betta to Kodamballi. *West.*—Kodamballi halla and Joghalli halla.
	II	1883	*North.*—By southern boundary of Kodamballi bamboo Coupe I. *East.*—Ridge 3929 (Karigarai Betta) and ridge 3670; thence stream from 3670 (via) 3200 Kodamballi halla. *South and West.*—By Kodamballi halla.
	III	2,148	*North.*—By Kodamballi halla. *East.*—By ridge 3888, 4353, 4300 to 4054 (Kurumbarai Betta). *South.*—Stream from 4054 (Kurumbarai betta) to Talamalai enclosure boundary. *West.*—By Talamalai enclosure boundary and Talamalai – Kodamballi footpath (via) hills 2880, 2850 and 2870; thence Nathialapuram enclosure line and Kodamballi halla.
12 Athani	I	1,889	*North*—By Gundri—Doddakombai footpath upto the streamlet flowing south ridge 3560; thence up the streamlet to rige 3560; thence the ridge 3560, 4330, 4490; thence along the streamlet from 4490 to Mapillai Gundripallam. *East.*—Thence Mapillai Gundapallam upto the junction of the stream from 3723 (Varaikalmalai). *South.*—Thence stream from 3723 (Varaikalmalai) to Mapillai—Gundapallam upto Range boundary. *West.*—By Range boundary.
	II	3,938	*North.*—Starting from the junction of stream from 4574 (Jiyappasami Malai) with Mapillai Gundapallam line fruns wup the said stream to hill 4574; *East.*—By ridge 4574, 4290, 3940 (Araikeda Malai) to footpath from Kemminimada Karumparai; Thence salong the said footpath via 1950 upto Reserved Forest line; thence Reserved Forest line. *South.*—Foot path from Karumparai to Doddakombai upto Mapiliai gnndapaliam. *West.*—Eastern boundary of Athnai Bamboo Coupe I.
	III	3,128	*North.*—Ridge along 4290, 4300, 3940, 4390 (near Okkaligallisetha malai 4391) and 3390 to footpath from Kongadai to Michealpalayam near Mavalatupatti. *East.*—Footpath from Kongadai to Michealpalayam upto its junction with Mungilpatti pallam; thence the said pallam and South Bargur Reserved Forest line to Senthallikaradu. *South.*—Reserved Forest line. *West.*—Eastern boundary of Coupe II.
13 Kinathadi	I	4,909	*North.*—Ridge from 4030 to Bolarai Guddai and then along streamlet from Bolarai Gunddai to Varattupallam. *East.*—Varattupallam and Reserved Forest Line. *South.*—Reserved forest line and Aladakoppu halla upto Sorai hatti (via) 1510, 1910, 2410 and 3250. *West.*—Footpath from Sorai hatti to Tolakarai and to ridge 4030, i.e. starting point.
	II	3,294	*North.*—Southern boundary of Kinathadi-Bamboo Coupe I. *East.*—Reserved Forest line. *South.*—Pevarai stream upto ridge 3670. *West.*—By ridge 3670, Kottamalayan koil to 4090 (Girumalai) and thence along streamlet from Girimala to southern boundary of Kinathadi Bamboo Coupe I.
	III	3,045	*North.*—Southern boundary of Kinathadi Bamboo coupe I and western and southern boundaries of Kinathadi Bamboo coupe II. *East.*—Reserved Forest line. *South.*—Mungilpattipallam and footpath from Michaelpalayam to Kongadai up to its junction with Girimalai (4090) Kongadai footpath; thence that path for about 16 chains where it meets footpath from Jadayaswami Koil: thence that path for about 6 chains to the southern boundary of Kinathadi Bamboo Coupe I.
14 Varattupallam	I	2,024	*North.*—Ridge from 4410 (Karadigumma) to 4120; thence down the streamlet from 4120 joining Varattupallam near Nammemaduvupatti; thence Varattupallam and up the opposite streamlet (Wihch joins Varattupallam near 1530) to the hall about 16 chains south of 3500; thence down another streamlet to join South Bargur Reserved Forest Line; *East.*—South Bargur Reserved Forest and footpath from Ondanai to Malleswaran koil (2570). *South.*—Stream from Malleswaran koil (2570) to Varattupallam; thence up the Varattupallam; thence up the stream coming form Karadigumma (4410). *West.*—Thence up the Stream coming from Karadigumma (4410) to the northern boundary of Kinathadi Bamboo Coupe I.
	II	1,372	*North.*—Northern boundary of South Bargur Reserved Forest. *East.*—Varattupallam. *South.*—Northern boundary of Varattupallam Bamboo Coupe I. *West.*—Streamlet from Karadigumma (4410) to South Bargur Reserved forest boundary.

Bamboo Working Circle—Statement of Coupes—cont.

Serial number and name of the felling series. (1)	Coupe number. (2)	Total area in acres. (3)	Boundaries. (4)
14 Varattupallam—cont.	III	1,232	*North and East.*—Northern boundary of South Bargur Reserved Forest. *South.*—Northern boundary of Varattupallam Bamboo Coupe I. *West.*—Eastern boundary of Varattupallam Bamboo Coupe II.
15 Matam	I	2,323	*North.*—Range boundary. *East.*—Thottapallam and Valukuparipallam (Koyilpallam). *South.*—Southern boundary of Ennamangalam Reserved Forest. *West.*—By Chinna Valukuparaipallam and stream from 2570 (Malleswaran Koil) and ridge ; thence Malleswaran Koil—Ondanai footpath and Range boundary.
	II	1,700	*North.*—Range boundary. *East and South.*—Range boundary ; thence stream form Matam flowing between ridges Karal Kumbam (3448) and Sigai Oddu (3160) to Jadayaswami Koil (1160) thence Valuku parai pallam upto 1100 ; *West.*—Eastern boundary of Matam Coupe I.
	III	2,902	*North.*—Range boundary. *East.*—Boundary between South Barugur and Ennamangalam Reserved Forests up to 1002. *South.*—By ridges along hills 1002, 1610, (Kokkikal), (Nasavankal) 2430, 1359 (Makal karadu) and 1100 to Valukuparaipallam. *West.*—Eastern boundary of Matam Bamboo Coupe II.
16 Hulical	I	912	The catchment areas of Chengalpallam, Pillur pallam and Kadambakombai pallam in Pillur slopes Reserved Forest.
	II	1,453	*North.*—The east-west ridge along 3460 from western reserve boundary to a main stream running from 3460 north of Nellur upto the reserve boundry between Hulical durg and Nellimalai Reserved Forests. *East and South.*—Reserved forest boundary between Nellithurai and Hulical durg Reserved Forests. *West.*—Stream from Ponnarakombai joining Bhavani river near Sottaiyur and Division boundary.
	III	338	*North.*—Conoor pallam forming reserve boundary and demarcated Reserved Forest boundary. *East.*—Eastern boundary of Hulical durg Reserved Forest. *South.*—Northern boundary of Coupe II. *West.*—Division boundary up to the starting point.

Serial number and name of the felling series. (1)	Coupe number. (2)	Total area in acres. (3)	Boundaries. (4)
17 Kallar	I	490	*North and east.*—Haduthorai halla forming reserve forest boundary up to railway line. *South.*—Railway line. *West.*—Chemlsford-Markodu footpath and Marikodu-Mutri estate footpath Reserved Forest boundary to starting point.
	II	685	*North.*—Kallar reserve forest boundary and the railway line and along southern boundary Coupe I (Railway line) up to Kallar pallam. *East.*—Reserve forest boundary of Kallar Reserve Forest. *South.*—Reserve forest boundary of Kallar Reserved Forest and then along Coonoor pallam forming reserve boundary of Kallar reserve. *West.*—Kallar reserve boundary (District boundary).
	III	680	*North.*—By Kutri estate–Marikodu footpath. *East.*—Marikodu-Chemlsford footpath up to railway line and along the railway line. *South.*—Along railway line forming part of northern boundary of Coupe II. *West.*—Reserved forest boundaries of Kallar and Haduthorai up to starting point.
18 Jaccaneri (part)	I	1,613	*North.*—Northern boundary Reserved Forest of Jacconeri slopes Reserved Forest up to the turning point below Ferandale. *East.*—Along Jaccaneri slopes Reserved Forest boundary and then along stream from Vellari Kombai up to southern boundary of Jaccaneri slopes Reserved Forest. *South.*—Jaccaneri slopes Reserved Forest boundary up to Kallar. *West.*—Kallar pallam (forming Jaccaneri slopes Reserved Forest boundary) up to starting point.
Jaccaneri (part)	I	245	The whole part of Kallar Reserved Forest lying within Coimbatore North Division.
		1,858	
	II	2,195	*North.*—Northern boundary of Jaccaneri slopes Reserved Forest until it meets Mettupalayam—Kothagiri road near Kunjapanai at 3149 and then along the said road. *East.*—Along the said road up to southern boundary of Jaccaneri slopes Reserved Forest. *South.*—Jaccaneri slopes reserve boundary up to eastern boundary of Coupe I. *West.*—Eastern boundary of Coupe I.
	III	2,560	*North.*—Northern boundary Reserved Forest of Jaccaneri slopes Reserved Forest. *East.*—Jaccaneri slopes Reserve forest boundary. *South.*—Jaccaneri slopes reserve boundary up to Mettupalayam–Kotagiri road. *West.*—Eastern boundary of Jaccaneri Bamboo Coupe II.
19 Ulliyur	I (A)	2,284	*North.*—Division boundary and thence Yemmehatti (3587) Velamundi chatram footpath up to deviation of footpath to Patramangalam. *East.*—Along footpath to Patramangalam and thence ridge to Arasanmokkai (2430) thence streamlet from Arasanmokkai to Thattaipallam along 1140 and 1020. *South.*—Thence up the Tattaipallam till it meets Kullam kerai pallam. *West.*—Thence up Kullan kerai pallam (North and eastern boundary of Coupe II) flowing along 1120, 1370 and 1840 to division boundary.

Bamboo Working Circle—Statement of Coupes—**cont.**

Serial number and name of the felling series. (1)	*Coupe number.* (2)	*Total area in acres.* (3)	*Boundaries.* (4)
Ulliyur (part) ..	I (B)	351	*North.*—Uppupallam via 2340 and 1170. *East.*—Stream from a hill between 1570 and 1770 flowing west of Marigudu. *South.*—Footpath from Pudur to Pathramangalam via 2500 and 1720. *West.*—Division boundary.
		2,635	
	II	1,461	*North.*—Division boundary. *East.*—Kullan kerai pallam via 1840, 1870 and 1120. *South.*—Up the Thattaipallam up to junction of Gandai—Kilkotagiri and Hallur—Kilkotagiri footpath and thence Gandi Kilkotagiri footpath. West.—Division boundary.
	III	658	*North.*—Division bundary. *East.*—Kilkotagiri–Hallur footpath up to Hallur halla. *South.*—Thence up along Hallur Halla up to division boundary. *West.*—Division boundary up to starting point.
	Grand total ..	178,438	

CHAPTER VII—SMALL TIMBER WORKING CIRCLE.

SECTION I—GENERAL CONSTITUTION OF THE WORKING CIRCLE AND CHARACTER OF THE VEGETATION.

263. The Small Timber Working Circle is formed with the object of meeting the timber requirements of the Plateau villages in Satyamangalam and Talamalai Ranges. The demand for small timber for ploughs and petty house construction is considerable and the unreserves are too poor in tree growth to meet any more than a fraction of it. Theft of timber is undoubtedly ripe around the hill enclosures. While the obligation on the department to provide legitimate means for meeting this demand is clear, what is not so readily realized is the equal obligation on the part of the population to make use of such means only and give up illicit practices. This is by no means a commercial venture for the department. It is for the hill people to avail of the concessions and help the administration to save the forests from indiscriminate and wide spread pilfering. Some faint awakening to their obligation to help the conservation of forests is already discernible among the more enlightened sections of the people and it is to be hoped that this tendency will assert itself powerfully enough in time. It is in that spirit that this Working Circle is revived.

The Working Circle is confined to the North Coimbatore Plateau. Success must be achieved here before extension to other localities can be thought of.

264. *Constitution of the Working Circle.*—The working circle will consist of forest areas within easy access of the hill enclosures.

265. *Division in to felling series.*—Twenty-one felling series are formed, of a total area of 58,128 acres. Practically all the more important villages and hamlets situated near the reserves have been provided for. The one chief exception is the Thalavadi area. Here a new reserve fuel series has been opened and it is expected that the produce will be largely consumed locally.

266. The series formed are described below :—

Name of hamlets served. (1)	*Area of the block allotted in acres.* (2)	*Boundaries of the block.* (3)
	SATYAMANGALAM RANGE.	
	1. *Kadambur Felling Series.*	
Eriyur, Tondur, Kalkadambur and Nadur.	2,308	North by Kalkadambur–Anjanai footpath ; east by 4,547 ridge Palayur–Urugamalai, Kuttai–Anjanai footpath ; South by 4,547 streamlet to Pumalai Pallam ; west by Pumalai Pallam and Gutialathur enclosure line.
	2. *Gundri Felling Series.*	
Gundri .. —	4,840	North by line joining 2,450 with Joginarimalai ; east by Joginarimalai ridge and on through 4,219 ; 4,229 to Siruvalur ; south by line joining Siruvalur 3,230 and footpath to Kongarpalayam ; west by Hull Barai ridge and line joining it with 2,450.
	3. *Kurumbur Felling Series.*	
Anakarai, Kurumbur; Arigiam and Makkanpalayam.	2,902	North by line joining Manjikattai karadu with Mensinattam and the footpath therefrom to Arigiam; east by Arigiam enclosure line ; south by Halera Halla and Kurumbur enclosure line ; west by Kurumbur–Anakarai footpath.

Name of hamlets served. (1)	*Area of the block allotted in acres.* (2)	*Boundaries of the block.* (3)
	SATYAMANGALAM RANGE—*cont.*	
	4. *Kadahatti Felling Series.*	
Tingalore	2,704	North by line joining 4,213, 3,912 and Sujjalkarai Chenniveerappan doddi footpath and the path itself; east by Kadahatti enclosure line and Bedarpalayam Yekkathur footpath; south by line joining Kugankallu, Asagatti Guddai and Yekkathur footpath; west by line joining Kugankallu 4,119 Dodda Malai and 4,213.
	5. *Germalam Felling Series.*	
Germalam	2,288	(*a*) North by line joining 3,471 Jadaiswami gudi, Lingamuthurayan Betta and Kollegal Road; east and south by Germalam enclosure line; west by Kollegal Road. (*b*) North by Germalam enclosure line; east by Karaliam–Germalam footpath; south by the line joining 3,650, 4,100 Jadaimadeswarankovil, 3,940, 4,070 and Kollegal Road; west by Kollegal road.
	6. *Kadagoundanhalli Felling Series.*	
Kadagoundanhalli–Ullepalayam	1,115	North by line joining Ballamadurina Halla, Kontikallu and solaikorai; east by Mondipalayam Halla south by Ullepalayam enclosure line; west by Batlamadurina Halla Series.
	7. *Yekkathur Felling Series.*	
Modikadaru, Tippanayakanur, Kembanayakanur, Yekkathur.	3,276	(*a*) North by line joining Solai Kerai 3,522 and Kallarpali Halla to Anaikorai footpath; east and south by Gutialathur enclosure line and Ullepalayam Reserved Forest boundary; west by Mondipalayam Halla.
Giddanpalayam, Basuvanapuram, Tirunalnayakanur.		(*b*) North by Ullepalayam Reserved Forest boundary; east and south by Gutialathur enclosure line; west by Koraliam–Kadagoundanhalli footpath. (*c*) North, east and south by the Barbetta Reserved Forest boundary; west by Kempanayakampalayam - Basuvanapuram footpath.
	8. *Iruttipalayam Felling Series.*	
Kilalathur, Salahatti, Dinnayur, Iruttipalayam, Billimugai, Akkichinan Doddi.	2,037	(*a*) North, east and south by Barbetta Reserved Forest boundary; west by Kempanayakampalayam – Basuvanapuram Footpath. (*b*) North by Jodumathihalla: east by Iruttipalayam Doddi Kurumbur footpath; south and west by Gutialatur enclosure line.
	9. *Karaliam Felling Series.*	
Karaliam, Yelanchi, Kanakundur, Asagattikombai, Kakkarai.	3,842	(*a*) North by Barbetta Reserved Forest bounary east by Barbetta Reserved forest boundary and Kempanayakampalayam, Basuvanapuram footpath; south and west by Barbetta Reserved forest boundary. (*b*) North by line joining Tekkan Guddai with the point where Ullepalayam enclosure line meets the Guthialathur Reserved Forest boundary; east by Guthialathur reserved Forest boundary; south by line joining 4,200 Jadhamadha Borai and on to 3,500 ridge; west by Tekkan Guddai, Odiel Hanal Shetti Ora 4,200 ridge.

Name of hamlets served.	*Area of the block allotted in acres.*	*Boundaries of the block.*
(1)	(2)	(3)
	SATYAMANGALAM RANGE—*cont.*	
	10. *Athiyur Felling Series.*	
Pavalakuttai, Germalam, Pudur, Athiyur, Hosapalayam.	1,667	North by Guthialathur enclosure line; east by Vale Modugu Pallam; south by line joining Kambtrayan temple to 3,716, 3,506 and Vale Madugu pallam; west by 3,500 ridge to Kambatrayan temple.
	11. *Hassanur Felling Series.*	
Hassanur	1,861	North by line joining Hanurdevaragudi 4,452 and Gaddesal road; east by Gaddesal road and line therefrom through 4,158, 4,180 to Hassanur Kottadai footpath; south by Hassanur enclosure line and Hassanur Kottadai footpath; west by Hassanur enclosure line.
	12. *Kottadai Felling Series.*	
Devarnatham, Kottadai, Mavahalla ..	2,836	North by Mavahalla–Gaddesal footpath and Mavahalla enclosure line; east by Mavahalla, Devarnatham, Osahatti footpath; south by Dimbam Osahatti road; west by line joining Dimbam Osahatti road 3,981 and on through ridge to Mavahalla-Gaddesal footpath..
	TALAMALAI RANGE.	
	1. *Talamalai Felling Series.*	
Talamalai, Doddapuram	1,721	North by line joining Talamalai enclosure line 4,054 and 4,183; east by the ridge passing through 4,183, 4,063 and on to Talamalai-Dimbam road; south by Talamalai-Dimbam road; west by Talamalai enclosure line.
	2. *Naidalapuram Felling Series.*	
Naidalapuram	2,268	North by line through Lokataram kerai, Hammalai kerai and 3,710 ridge; east by Kariagiri Betta streamlet; south by Naidalapuram enclosure line; west by Naidalapuram-Chikkanhalli footpath.
	3. *Chikkahalli Felling Series.*	
Higgalore	3,820	(*a*) North by Maharajanpuram-Mukampalayam footpath; east by Balapadagu Halla; south by Chikkahalli enclosure line; west by Chikkahalli-Maharajapuram footpath. (*b*) North by Chikkahalli enclosure line east by 3,710 ridge line to the eastern extremity of Chikkahalli enclosure line; south by line joining Hammalai and 3,710 ridge; west by Kodamballi-Huggalore footpath.
	4. *Doddagajanur Felling Series.*	
Haripuram, Doddagajanur, Chikkagazanur.	3,854	North by Talamalai reserved forest boundary; east by Naidalapuram Chikkahalli-Maharajapuram footpath; excluding the portion in Chikkahalli enclosure; west by Naidalapuram-Chikkagazanur footpath-Chattarathukerai stream, Joghatti Halla and Halbidda Halla.

Name of hamlets served. (1)	Area of the block allotted in acres. (2)	Boundaries of the block. (3)
		TALAMALAI RANGE—*cont.*
		5. *Bayinapuram elling Series.*
Bayinapuram, Madalli, Chimthalli, Kamayanapuram, Panakahalli, Angadevanapuram, Singanapuram.	3,806	North and east by Talamalai Reserved Forest boundary; south by Palayam-Kadapur footpath: west by Talamalai Reserved Forest boundary.
		6. *Belathur Felling Series.*
Belathur, Kongalli, Gottavadi.	4,012	North by palaym, Kadapur footpath : Talamali Reserve Forest boundary and Gottavadi Karunguddai footpath ; east by Jirganhalli betta ridge ; south by line joining Jirganhalli Betta-Jalada-Oddu and 2,960 ; West by Gudi streamlet and line through 3,550 jointing it with Balayam-Kadapur footpath.
		7. *Jiragahalli Felling Series.*
Doddamudukerai, Eruganahalli, Kalbandipuram.	1,636	North by Naidalapuram–Eruganahalli footpath ; east by ridge line joining 3,280, 3,339 and Doddahalla ; south by Gettavadi–Karu Guddi footpath ; west by Tamalai Reserved Forest boundary.
		8. *Tiganari Felling Series.*
Tiganari, Malkuttipuram.	2,086	North by Talamalai Reserved Forest boundary east by Joghatti halla and streamlet, Naidalapuram–Chikkazajanur footpath ; south by Naidalapuram Tiganari footpath ; west by Talamali Reserved Forest boundary.
		9. *Mudianur Felling Series.*
Sirganhalli, Kelipuram, Mudiyanur.	3,253	North by line joining 3,452 with south west corner of Naidalapuram enclosure line, then that boundary line and line joining 4‘353 and 4,183 south by line joining 4,183, 4,054 and Talamalai enclosure line and Talamalai Mudiyanur foot-path ; west by Mudiyanur enclosure line and line joining the same with 3,453.

267. *Character of the Vegetation.*—The dry deciduous typeof forest is included in this Working Circle.

268. *Section 2—Method of treatment.*—For any scheme to have a reasonable prospect of success, it is essential to allow a degree of latitude to the ryot, to choose the trees which may suit his needs and his fancy; for, individual predilections largely govern his choice of the tree and the shape and specifications of the ploughs by far the most important article.

Bearing this in mind, it is prescribed that sufficient area will be demarcated and worked every year to meet the local requirements. The trees to be felled will be marked and numbered after careful selection with the active help of experienced local ryots. The method of treatment will be selection coppice of the marked trees and the regrowth will be depended on for regeneration. The trees will be sold individually to ryots who will be required to coppice the trees they fell. The actual number of series worked every year will depend on the current demand and convenience of the management.

269. *Exploitable size.*—Only trees 15 inches girth or above at breast height shall be marked for felling.

270. *Choice of species.*—With the exception of sandal, *Terminalia Chebula Dalbergia latifolia, Pterocarpus marsupium and* Tamarind, any species may be marked for felling.

271. *Felling cycle.*—As the working may not be continuous, there is no purpose in fixing any felling cycle. It is enough if it is ensured that an area is not worked oftener than once in ten years.

SECTION 3—METHOD OF EXECUTING THE FELLING.

272. *Marking of the trees.*—As already stated, the selection and marking of trees, shall be carried out with the assistance of local ryots. The possibility of obtaining one or more plough shares shall ordniarily be the criterion in the selection of trees. Timber left over after the conversion of plough-shares may be used to meet local requirements of yokes porotes, handles, etc. Any special demand for other material must be met by marking additional trees. The trees shall be numbered serially for each coupe. The selection and enumeration of the trees shall be done in November, December and January. The details as well as the number and kind of agricultural implements expected from each tree shall be recorded in Madras Forest Code Form 3 and a copy submitted by the Range Officer, to the District Forest Officer, not later than the end of January. A minimum of 10 per cent of the number of trees should be checked by the Range Officer.

273. *Lay-out of coupes.*—The successive coupe should be so arranged that as far as possible all of them will be equidistant from the main villages to be served. The District Forest Officer will be free to lay out the first coupe in any convenient part of the felling series indicated. Successive coupes should normally be contiguous. The boundary of the coupe should be clear and readily traceable by the ryots. Each coupe shall be divided into 4 or more, nearly equi-productive strips, of 50 acres or less in extent. The intention is to localise fellings at any one time in an area that the staff can supervise.

274. *Regulation of working.*—Each coupe shall be open for fellings every day for a period of two months, preferably from the 1st of February to the 31st March. The fellings shall be confined to the coupe and to marked trees in the coupe. Violations of this Rule will be treated as a Forest Offence.

275. *Permits.*—Each permit will cover the felling and removal of one tree only. The permit will specify the number of the tree and the name of the Permit-Holder and will be valid for one day. The permit-holders will be required to fell the trees close to the ground level. No trimming of the stool is necessary.

276. *Agency for the issue of permits.*—The coupe may be worked through the agency of a local ryot or group of ryots, or if this is not feasible, through the issue of permits, at the coupe by a forester every day except holidays during February and March.

277. *Value of permits.*—The value of the permit be fixed with reference to the girth and species of the tree by the District Forest Officer and will be subject to revision from time to time.

278. *Notification of coupes.*—Before opening the copes, wide publicity will lbe given to it in the various villages.

SECTION 4.

279. *Tabular statement of fellings.*—As the extent and location of coupes will depend on the demand, no tabular statement of fellings can be given.

SECTION 5—SUBSIDIARY SILVICULTURAL REGULATIONS.

280. No subsidiary silvicultural measures are prescribed.

SECTION 6—OTHER REGULATIONS.

281. *Grazing.*—There will be no restriction on grazing except in areas closed under prescriptions in other chapters.

292. *Control.*—(Vide Chapter No. XIII on Miscellaneous regulations).

CHAPTER VIII—GRAZING WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

283. *Extent.*—The Grazing Working Circle includes all the Reserved Forests of the Division with the exception of areas which are or may be closed to grazing on silvicultural or punitive grounds.

284. *Areas prescribed for closure.*—The following areas will be closed to grazing :—

(1) Bison areas, viz., Minchigally valley (Area 6,640 acres), the country between Hassanur and Onnsithittu in Tolamalai Range and the hill areas to the south of Talamalai and the hill areas to the south of Talakarai and thence west-words towards Gundri, Cattle inoculated against rinderpest will however be allowed to enter such areas.

(2) All regeneration areas for a period specified under the respective Chapters.

(3) Other areas closed from time to time for silvicultural reasons or as a punitive measure.

285. *The Fuel working circle—A new experiment in closure.*—Of the twenty-three fuel series, twenty-two will be governed by the same regulation as hitherto, viz., Coupes will be closed for the first five years (including the year of felling) during the rotation of thirty years. In the remaining one series, viz., the Bennari east series in Satyamangalam Range, experimental closure only during the latter twenty years of the rotation will be tried from 1956–57 onwards. The topic is dealt with at greater length in the Chapter on the Fuel Working Circle. Briefly, the theory behind the experiment is that such closure will afford better grazing as well as encourage the natural regeneration of valuable fuel species. This view is not generally accepted yet and much care is necessary in carrying out the experiment and assessing the result.

SECTION 2—METHOD OF TREATMENT.

286. *Regulation of grazing.*—Grazing will be regulated by permits subject to the usual conditions, at rates sanctioned by Government.

287. *Issue of grazing Permits and Penning Licences.*—Grazing permits will continue to be issued by departmental agency.

The following rates are inforce :

	RS.	A.	P.
Sheep	0	2	0
Cow or Bull	0	4	0
Buffalo	0	8	0

288. *Grazing year.*—The grazing year is from the 1st of July to the 30th of June following :

289. *Grazing unit.*—The entire division will form the grazing unit. Grazing to a limit of ½ mile by the cattle of the adjacent forest division will be allowed as hitherto and vice versa.

290. *Penning.*—In the authorised pens of the division, penning may be permitted free for licensed cattle. Penning licences will be issued for individual pens on application from individual owners.

291. *Pen Hygiene.*—Simple measures like changing the actual cattle stand at frequent intervals and disposal of manure either by burying or burning, when there is no demand for it, will be introduced and enforced with increasing strictness, as the benefits come to be known. The help of the touring Veterinary doctors may be taken whenever possible.

292. *Closure of burnt areas.*—The District Forest Officer has powers to close pens in the vicinity of which fires have occurred or for any other reason at his discretion. Powers to close to grazing areas subjected to repeated fires should be more frequently used than hitherto.

293. *Fodder grass.*—The right to remove hill grass will be sold in auction annually as hitherto. But the cutting and removal of grass in Head Loads by the public for bona-fide domestic uses and not for sale, will be permitted free from all areas except experimental plantations and kumri areas.

SECTION 3—SUBSIDIARY MEASURES OF IMPROVEMENT.

294. *Posture improvement.*—This division has a long background of grazing research. The results of research on pasture improvement conducted in the division are reproduced below (*vide* Conservator's Field Inspection Notes of North Coimbatore Division for 1945).

Experiments in pastures improved artificially by the introduction of Kolukkattai grass.—Experience shows that this grass is easy to introduce, but that cattle graze it in preference to and to the detriment of natural grasses. In such cases, Kolukkattai persists only for about four years in a pasture. 'It is believed that the contouring of pastures, by loose stones on trenches and the plugging of gullies leading to improvement of the natural grasses is preferable to the introduction of Kolukkattai.'

In view of these conclusions reached at the end of long study, it does not seem worthwhile to embark on any large scale artificial introductions of new species of grasses.

However, kumri work on a large scale is proposed to be taken up under the prscriptions of rehabilitation working circle and this provides an opportunity for improvement of pastures at low cost. With or after the last field crop, the kumridars will be required to sow *Cenchrus ciliaris* (Kolukkattai), Sudan grass and suitable leguminuous species such as *Tephrosia candida* to improve the protein content of the pasture. The live fences which will be raised round kumri areas will facilitate the formation of grazing paddocks and the introduction of rotational grazing when circumstances become propitious.

SECTION 4—OTHER REGULATIONS.

295. *Demarcation of closed areas.*—All areas closed to grazing shall be clearly marked off on the ground by means of red sign-boards placed at as many points as necessary.

296. *Grazing notification.*—The grazing notification will be published annually in the District Gazette. It should be carefully drawn up with reference to the prescriptions in this chapter.

CHAPTER IX—WORKING PLAN FOR THE MINOR FOREST PRODUCE WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

297. The Minor Forest Produce Working Circle covers the whole division including the former panchayat forests. The minor forest produce of unreserves in or adjoining the reserves will be exploited along with those of the reserves. Tamarind from unreserves will, however continue to be managed by the Revenue department.

SECTION 2—METHOD OF TREATMENT.

298. *System.*—The contract system will continue for the present. Efforts are already being made to form multi-purpose tribal co-operative societies, on the lines of the society successfully working in Tunacadavu Range of Coimbatore South Division for the last three years. It is hoped that these will soon take concrete shape. In such a case, all the minor forest produce in the hills (except ivory) will be collected by the co-operative society.

299. Deer and Sambhur horns and honey and wax will be collected by the department as at present pending the formation of co-operative societies. This is in order that damage to the forest by fire and destruction of game may be avoided. Elephant tusks will always be collected departmentally.

Circumstances may ,however, make it desirable for particular kinds of produce to be worked departmentally. Departures from the general system of leases should be freely made with the prior sanction of the Conservator of Forests whenever they seem necessary or expedient. To give one example, when a very low or no price is realised in auction for a produce like tamarind, the Range Staff should be prepared to collect it departmentally.

DETAILS OF MINOR FOREST PRODUCE LEASE.

Name of range and locality and items to be leased out.

300. *Mettupalayam Range.*—Reserved Forests and unreserves belonging to Mettupalayam Range, except the Panchayat Forests and the area handed over for Kallar Fruit Garden.

(1) *Avaram* bark (*Cassia auriculata*).
(2) Stone and tree moss.
(3) Fodder grass.
(4) Other items of minor forest produce.
(5) Gall-nuts (*Terminalia chebula* fruits).
(6) Seeds of *Pungam* (*Pongamia glabra*) seeds of neem (*Azhadirachta indica*) seeds of *Mohwa* (*Bassia latifolia*) and seeds of *Pinnai* (*Calophyllum inophyllum*).
(7) Lemon grass (*Cymbopogon* species).

Mettupalayam Range—Panchayat Forests

(1) *Avaram* bark (*Cassia curiculata*) and other minor forest produce.
(2) Seeds of *Pungam* (*Pongamia glabra*) seeds of *Neem* (*Azadirachta indica*), seeds of *Mohwa* (*Bassia latifolia*) and seeds of *Pinnai* (*Calophyllum inophyllum*).
(3) Lemon grass (*Cymbopogon* species).

301. *Bhavani Range.*—Reserved forests and unreserves belonging to Bhavani Range except the areas under Panchayat management at Nagalur, Kuvuttupalayam and Pudupalayam in Bhavani taluk.

(1) *Avaram* bark (*Cassia auriculata*).
(2) Stone and tree moss.
(3) Fodder grass.
(4) Other items of minor forest produce.
(5) Date leaves and *Malaminji*.
(6) Gall-nuts.
(7) Seeds of *Pungam*, *Neem*, *Mohwa* and *Pinnai*.
(8) Lemon grass.

Bhavani Range.—The five Panchayat Forests in Erode taluk.

(1) Avaram bark (*Cassia auriculata*) and other minor forest produce.
(2) Seeds of *Pungam*, *Neem* *Mohwa* and *Pinnai*.
  (a) Custard apple in Arachalur reserved forest.
(3) Lemon grass.

302. *Satyamangalam Range.*—Reserved Forests and Unreserves belonging to Sathyamangalam Range.

(1) *Avaram* bark (*Cassia auriculata*).
(2) Stone and tree moss.
(3) Fodder grass.
(4) Other items of minor forest produce.
(5) Gall-nuts.
(6) Seeds of *Pungam*, *Neem*, *Mohwa* and *Pinnai*.
(7) Lemon grass.

303. *Talamalai Range.*—Reserved Forests and Unreserves belonging to Talamalai Range except the Panchayat Forests.

(1) *Avaram* bark (*Cassia auriculata*).

(2) Stone and tree moss.

(3) Fodder grass.

(4) Other items of minor forest products.

(5) Gall-nuts.

(6) Seeds of *Pungam*, *Neem*, *Mohwa* and *Pinnai*.

(7) Lemon grass.

Talamalai Range—Panchayat Forests.

(1) Avaram bark (*Cassia auriculata*) and other minor forest produce.

(2) Seeds of *Pungam*, *Neem*, *Mohwa* and *Pinnai*.

(3) Lemon grass.

304. For Gall-nuts, the lease period will be for nine months from the 1st of August to the 30th of April following. Lease of Tamarind (*Tamarindis indicus*) will be annual for each range as an unit and the lease period will be for six months from the 1st of January to 30th June. *Cassia fistula* (*Konnai*) bark is also not included in the lists above as it will be treated as one unit and the Ranges will be worked in rotation as follows :—

Form.	*Years of working.*
Sathyamangalam Range	1958-59 1961-62 1964-65 1967-68 1970-71
Talamalai Range	1958-59 1961-62 1964-65 1967-68 1970-71
Bhavani Range	1956-57 1959-60 1962-63 1365-66 1968-69
Mettupalayam Range	1957-58 1960-61 1963-64 1966-67 1969-70

305. The following points have to be noted in respect of the leases above :—

Sholaga settlements.—The Sholagars may be allowed to collect the minor forest products in the settlements for their own use but not for sale.

Fodder grass.—The right to collect and remove fodder grass should not interfere with the free removal of grass in head loads by the public on bona fide domestic use.

Avaram bark, fodder grass, lemon grass and stone and tree moss will be sold separately. All other items of produce will be sold either jointly or separately or in convenient groups at the discretion of the District Forest Officer in each Range unit.

The items of minor forests produce to be removed under each lease should be specifically named in the agreements.

SECTION 3—DISTILLATION OF ESSENTIAL OILS.

306. The division has had several years of experience of distillation of essential oils from the fragrant grasses occurring in the division (viz., *Cymbohogan flexuosus Martini*

and *Caesius*). Started in 1942–43, these efforts were at first very successful and remunerative. The Kerala Soap Institute consumed the entire production of Flex Oil at agreed rates. From November 1944, the price for lb. was increased to Rs. 14 per lb. and the institute later refused to take further supply at the existing rate. It is observed in Conservator's Field Inspection Notes for 1949 as follows:—

> "When originally distillation was started it was hoped that on knowing its profits, private enterprise would step in and take it up. We have demonstrated what can be done in the matter. In spite of efforts made, no private concern is willing to come forward to take the concern. It is therefore for consideration whether the departmental distillation should not be closed. I am of opinion that it need not be continued."

Finally the distillation of flex oil was stopped in 1950.

307. It is not proposed to revive the work of distillation. However, a simple experiment in uprootal of grass for distillation in conjunction with wattle planting is proposed in the following paragraph. The experiment was suggested by the Chief Conservator of Forests.

308. In the lemon grass areas above Ceddasal Settlement, one acre will be selected. Over 1/2 acre, the grass will be uprooted completely and wattle planted at 11 feet by 11 feet. Over the other 1/2 acre 11 feet strips will be cleared along the contours leaving 11 feet belts intact in between. Wattle will be planted in the middle of the cleared strips at 11 feet interval. The uprooted grass will be used for oil distillation. A careful record of cost should be maintained. The experiment should be repeated every year for five years at the end of which the results may be assessed and the orders of the Chief Conservator of Forests obtained regarding the future of the project. It is expected that the process will enable the department to plant up the grassy slopes with wattle and at the same time make the economics of lemon grass distillation sounder as the cost of the uprootal of grass will be debited to the regeneration of wattle.

SELTION 4—SUBSIDIARY &EASURES OF I PROHEMENT.

309. *Cashewnut plantations.*—It is proposed in the Chapter on the Rehabilitation Working Circle to raise cashewnut kumries on a large scale. Preparations are already under way to take up about 240 acres in Talamalai Range for cashewnut kumries.

310. *Gall-nuts.*—Fires take a heavy toll of gall-nut saplings and even of trees in the hills. To conserve and improve the existing stocking of gall-nut trees is largely a question of fire protection. It is unnecessary to take up any planting though obtaining germination in nursery beds presents no longer any problem. It should be quite enough if some method is devised to develop the advance growth of gall-nut saplings, so common in the grassy areas in the hills. An experiment to tend and fire protect the natural regeneration of this species as also of the timber species occurring in the locality is proposed in the Chapter on "Miscellaneous Regulations".

311. *Tamarind saplings in Chennimalai and Vellikaradu Reserved Forests.*—It was the practice during Panchayat management of Chinnimalai and Vellikaradu Reserved Forests to raise annually in each Reserve Forest twenty-five *Tamarind* seedlings protected by a *Balsamodendron berryi* live fence round each plant. It is interesting to see how well this method has worked. Many nice and healthy Tamarind saplings are seen breaking through the live fence. These saplings need some tending. This will be carried out during 1956–57. It is well worth continuing a practice that has yielded fruitful results. It is accordingly prescribed that 50 *Tamarind* plants will be raised annually in the fuel coupe of the previous year. Each plant will have a *Balamodendron* live fence. The first coupe is being felled during 1956–57 and the planting will be done from 1957–58 onwards.

312. *Palmyrah in Shanar and other kumries.*—Palmyrah jaggery mnufacture is a common village industry in these parts. In the Shanar villages in Bhavani taluk it is the chief occupation. The Shanars pay as much as Re. 1 Rs. 1/8 per tree annually for the lease of tapping private palmyrah trees. The species is not festidious about its

requirements and is not browsed or illicitly felled. Besides, Palmyrah leaves are of much use in shading young seedlings of cashewnut and other species. It is therefore suggested that the species be raised by sowings in Kumries in all localities wherever a demand exists in the neighbourhood for the species.

CHAPTER X—WORKING PLAN FOR TEAK POLE WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

313. *Constitution.*—An area of about 46 acres in Hulical drug reserved forest consisting of teak plantations formed since 1932 is constituted into the teak pole working circle, situated to the south of Coonoor river, the area is served by an artificial channel carrying water from the river to the paddy fields below. The perennial water source, often rich in silt washed down from potato fields higher up in the Nilgiris District and the gently sloping country below the channel are the features that favoured the formation of these plantations with the aid of irrigation. The terrain rises steeply to the West and there is no scope for extending the plantations.

SECTION 2—DIVISION INTO BLOCKS AND COMPARTMENTS.

314. Particulars of the existing teak plantations are given below :—

Serial No.	*Year of formation.*	*Extent in acres.*	*Other information.*
1	1932	3·25	
2	1933	4·25	
3	1934	2.33 2·95	The regeneration area is divided into two by electric tower line.
4	1936	0·90 0·68	Do. Do.
5	1937	0·96 1·00	Do. Do.
6	1938	2·08	
7	1939	2·57	
8	1940	2.00	
9	1942	3·10 2·30	Planting was done in two separate areas.
10	1943	4·55 2·00	The regeneration area is divided into two by electric tower line.
11	1944	4·57	
12	1945	2·72	
13	1946	0·54	
14	1947	0·38	
15	1948	1·38	
16	1949	1·70	
	Total area ..	46·21 acres.	

It is proposed below (paragraph 10) to fix the rotation at twenty years and to treat the available total area as one complete series. It is therefore necessary to lay out 20 units of somewhat equal extent for annual clearfelling and planting, altering the boundaries suitably as set forth below :—

Years of formation.		*Area in acres.*	*Remarks.*
Regeneration area :—			
I	1932	3·25	
II	..	..	
III	1933	4·25	
		2 or	To be divided 2·13 and 2·12 respectively,
IV	..	2.33	As divided by the electric Tower line.
V	1934	2·95	
VI	1936	1.58	
VII	1937	1.96	
VIII	1938	2.08	
IX	1939	2.57	
X	1940	2.00	

Regeneration area :—

Years of formation.		*Area in acres.*			*Remarks.*
XI	1942		3.01		**Two separate plots exist.**
XII	1942		2·02		
XIII	1943			4.55	**The Southern half of the 1943 plantations to be sub-divided respectively.**
XIV	..	2.28 and 2.27			
XV	1943		2.00		**The part of the 43 plantation to the North of the Tower lines.**
XVI	1944		4.57/2		**To be divided into 2·28 and 2·29 respectively.**
XVIII	1945		2.72		
XIX	1946		4.54		2.30
	1947		0.38		Three years plantations to **constitute** one unit.
	1948		1.38		
XX	1949		1·70		

The boundaries of plantations as exist on the ground and the plot boundaries as proposed now are indicated in the management map attached. The revised boundary demarcation in the field will be effected progressively as sucessive areas are taken up for clearfelling and regeneration annually.

Section 3.—Analysis and Valuation of the Crop.

315. The following table gives the curent average height and girth measurement of dominant in each plantation as well as the quality class assessment of the older plantations.

Year of formation.	*Age.*	*Average girth at breast height of dominants.*	*Average height of domindnts.*	*All India quality class.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
1932	22	3′2·3″	58′.6″	1·3 III	This relates the original plantation.
Lower half of 1932 clear felled in 1938.	16	2′.1″	56′.6″	0.7 III	
1933	21	2′.2.8″	55′.8″	1·6 IV	
1934	20	2′.7.5″	61′.5″	9·7 III	
1936	18	2′.2.8″	52′.7″	1.5 IV	
1937	17	2′.1.8″	51′.2″	1·5 IV	
1938	16	1′.2″	48′.7″	1.2 IV	
1939	15	2′.3″	49′.3″	1.5 IV	
1940	14	1′.10.8″	46′	1.2 IV	
1942	12	1′.11.5″	45′.5″	1.7 IV	
1943	11	1′.11.5″	46′.5″	..	
1944	10	1′.3.3″	32′.5″	..	
1945	9	1′.1.8″	29′.11″	..	
1946	8	1′.5 1″	40′.9″	..	
1947	8	1′.5.8″	40′.9″	..	
1948	6	1′.7·3″	44′.8″	..	
1949	5	1′.6·8″	40′.8″	..	

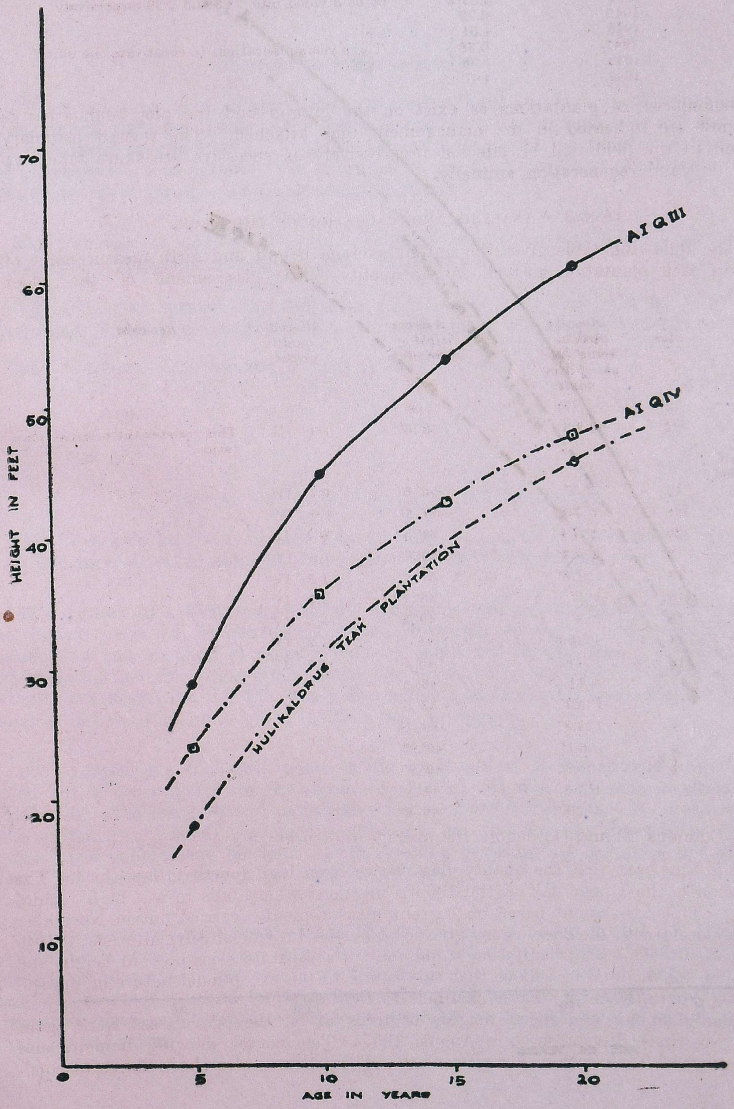
Note.—Columns (3) and (4) denote the average measurements of 20 **dominants.**

316. It is thus seen that the quality class varies from high fourth to low **third. The** only exemption is the Upper half of the 1932 plantations which falls in a high third quality area. This assessment based on current measurements (carried out in November 1954) agrees closely with the conclusions arrived at by the Provincial Silviculturist, in 1949 He also observed " The 1932 plantation stands out in a separate class both in height and diameter and I am inclined to believe that this is due to the exceptional nature of the soil and the close proximity of the water channels to this area ".

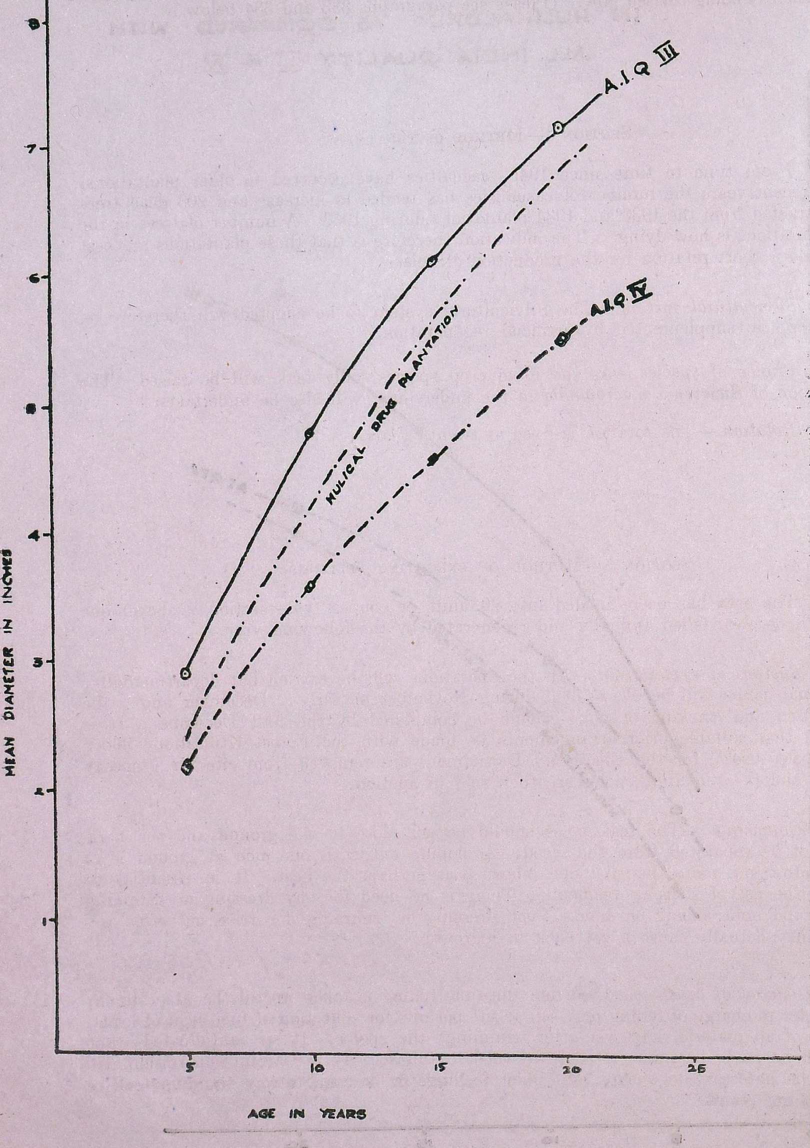
317. Mean diameter and mean heights of trees in all the age classes were again recorded by the State Silviculturist in August 1957. Two curves showing diameter and height increment of Teak with age are attached. These curves also show the correspond-

ing curves for All India IV and III qualities (Yield and stand tables for Teak by Laurie and Sant Ram). The Hulical drug plantations correspond to below IV quality as regards height increment and to All India III—IV quality as regards girth increment.

GRAPH SHOWING TEAK HEIGHT INCREMENT IN HULIKALDRUG AS COMPARED WITH ALL INDIA QUALITY III + IV



GRAPH SHOWING - TEAK DIAMETER INCREMENT IN HULICALDRUG - TEAK PLANTATIONS AS COMPARED WITH ALL INDIA QUALITIES III & IV



318. It is commonly observed in all plantations of ages 7 to 20, particularly in the age classes 15 to 20 years, that trees for away from irrigation channels and in poor shallow soils, show the phenomenon of top dying. The dying of these trees is due to physiological drought as the rainfall in the area is insufficient to support the crop in good condition. Till now irrigation of the plantation was done only for the first 6 years. The scheme of irrigation is being revised now. (Please see paragraphs 333 and 334 below.)

SECTION 4—METHOD OF TREATMENT.

310. From time to time since 1945, casualties have occurred in older plantations. During recent years the number of casualities has tended to increase and 208 dead trees were extracted from the 1933 and 1934 plantations during 1953. A number of trees in the 1934 plantations is now dying. The indication therefore is that these plantations are best worked on a short rotation for the production of poles.

320. *Silvicultural system.*—The Silvicultural system to be adopted will therefore be simple coppice, supplemented by artificial regeneration.

321. *Choice of species.*—As the main crop species, only teak will be raised. The introduction of *Swietenia macrophylla* in the understorey will also be undertaken.

322. *Rotation.*—The rotation is fixed at twenty years.

SECTION 5—METHOD OF EXECUTING FELLINGS.

323. The area has been divided into 20 units or coupes (vide section 2 above) one coupe will be clear-felled annually and regenerated by the following year.

324. *System of exploitation.*—All the operations will be carried out departmentally. The annual coupe will be clear-felled during November or early December and the classification and stacking of poles should be completed by the 31st December. It is suggested that suitable prior arrangements be made with the Forest Utilisation Officer so that poles useful for the Electricity Department are removed from site for speedy despatch and the remaining poles are then sold in auction.

325. *Coppicings.*—The teak poles should be cut close to the ground and the bark should not be separated from the wood. A sloping cut with one side at ground level and the other not more than 6 inches above it is perhaps the best. It is essential to insist on the use of sharp implements. There is no need for any dressing or trimming of stools and none should be done. Such dressing or trimming if carried out after any interval may actually cause a set back to regrowth.

326. *Disposal of brush wood.*—From the time felling is taken up till the 31st March, the Forester in charge of felling may sell at site permits for collection of fuel in head loads, from out of all material left over after trimming the poles. It is anticipated that three will be ready demand for such firewood in this locality. Careful supervision will however be necessary to ensure that illicit feellings or damage to any standing teak or sandal do not result.

SECTION 6—TABULAR STATEMENT OF FELLINGS.

327. The sequence of fellings is shown in the statement below :—

Coupe number.	*Plantation year.*	*Area.*	*Year of felling.*
I	1932	3.25	1954–55
II	1933 (part)	2.13	1955–56
III	1933 (rest)	2.12	1956–57
IV	1934 (part)	2.33	1957–58
V	1934 (rest)	2.95	1958–59
VI	1936	1.58	1959–60
VII	1937	1.96	1960–61
VIII	1938	2.08	1961–62
IX	1939	2.57	1962–63
X	1940	2.00	1963–64
XI	1942 (part)	3.10	1964–65
XII	1942 (rest)	2.30	1965–66
XIII	1943 (part)	2.27	1966–67
XIV	1943 (part)	2.27	1967–68
XV	1943 (part)	2.00	1968–69
XVI	1944 (part)	2.28	1969–70
XVII	1944 (rest)	2.29	1970–71
XVIII	1945	2.77	1971–72
XIX	1946, 47, 48	2.30	1972–73
XX	1949	1.70	1973–74

SECTION 7—REGENERATION OPERATIONS.

328. *Burning.*—No. burning is permitted in the felled areas as regeneration is partly by coppice. Slash disposal may present no big problem, as intensive utilisation by the head load permit holders is anticipated.

329. *Aligning and stacking.*—The espacement will be 8½ feet by 8½ feet. Aligning and stacking will be completed by the middle of April. (The correct method of carrying out aligning is described in detail on page 42 of the Madras Forest Pocket book).

330. *Mode of irrigation.*—A series of experiments were conducted in the plantations from 1932 onwards to determine (1) how far irrigation helped the crop (2) the best method to irrigate the crop (a) by flooding (b) by percolation (3) the optimum frequency of irrigation. The result of the experiments may briefly be stated as follows :—

(1) Irrigated crops put on definitely better growth, but ceased to be effective after 6 years including the year of planting.

(2) Irrigation by percolation is not only more economical but is as effective as irrigation by flooding.

(3) With irrigation by percolation for a period of 8 hours at a time a frequency of irrigation once a fortnight appears to be sufficient. Irrigation once a month on three successive days each day for 8 hours, give more or less the same results.

331. *Irrigation channels.*—Irrigation by percolation will therefore be adopted as the standard method. The main and subsidiary channel will be laid out before the end of March. The subsidiary channels running midway between tree lines will be as nearly along the contours as possible and their drop will be 1 in 200 or less. To ensure slow and effective percolation, water channels 1½ feet wide and 1 foot deep will be adequate.

332. *Planting.*—Planting of teak stumps will be taken up and completed before the middle of April. The stumps required were hitherto obtained from South Coimbatore and other divisions; but hereafter stumps may be produced locally in the same Range. About 1,500 stumps will be ample for the requirements here inclusive of any casualty replacement.

333. There will be about 603 stakes per acre at 8½ by 8½. Teak stumps will be introduced only where no vigorous coppice from the felled poles occurs within 2 feet of the stake. Selected stumps of the optimum size will be used and the planting done in crowbar holes.

334. *Irrigation regime.*—The area to be planted will be irrigated for three or five days before planting. After planting no irrigation need be done till the stumps sprout, when irrigation should be resumed and done once a week for eight hours. The frequency of watering should be gradually reduced and by September an 8-hour days irrigation once a fortnight should suffice. Wherever rainfall is appreciable irrigation can be reduced accordingly. During a normal north-east monsoon, irrigation may even be suspended. The watering may be resumed thereafter and continued in this manner till the 6th monsoon after planting when it can be stopped.

335. Irrigation will be done again at the ages of 8, 11, 14 and 17, in order to prevent the dying of trees due to drought. (Please see paragraph 318 above).

SECTION 8—SUBSIDIARY SILVICULTURAL REGULATIONS.

336. *Tending.*—Active stools putting forth coppice shoots will be cleaned in the year following clear felling leaving one stem per stool. The planted seedlings will be weeded twice or thrice as found necessary, during the first two years. Soil working will be carried out along with such weedings.

337. *Thinnings.*—Ordinary 'D' Grade thinning will be done at the ages of 7 and 13 years. The number of stems to be retained after thinning will be as follows :--

Number of stems to be retained after thinning at age 7 years 320

Number of stems to be retained after thinning at age 13 years 210.

As the area is small it is possible to check the actual number of stems after thinning and record the same in the plantation journal.

338. *Table of thinnings.*—The tabular statement of thinnings is furnished below :—

Serial number.	*Year.*	*Plantation to be thinned.* *7 years thinning.*	 *13 years thinning.*
(1)	(2)	(3)	(4)
1	1955–56	1948	1942
2	1956–57	1949	1943
3	1957–58	..	1944
4	1958–59	..	1945
5	1959–60	..	1946
6	1960–61	..	1947
7	1961–62	R.A. I	1948
8	1962–63	R.A. II	1949
9	1963–64	R.A. III	..
10	1964–65	R.A. IV	..
11	1965–66	R.A. V	..
12	1966–67	R.A. VI	..
13	1967–68	R.A. VII	R.A. I
14	1968–69	R.A. VIII	R.A. II
15	1969–70	R.A. IX	R.A. III

339. *Climber cuttings.*—The Hulical drug R. F. is a very badly climber infested area. Climber cutting must be attended to all the time and the entire plantation kept constantly free of climbers. Besides this along with every marking for thinning, climber cutting will be carried out thoroughly.

SECTION 9—OTHER REGULATIONS.

340. *Irrigation.*—Taungya planting was given up in 1935 as there was objection from the lower ripanian land owners for the division of water for kumri crops. Teak planting was resumed from 1936 onwards without the aid of field crops as permitted by the Collector of Coimbatore. No objection is expected to the limited use of water henceforth for teak planting alone.

341. *Demarcation.*—The limits of coupes as will be clear-felled and planted now onwards will be marked in the field with stone slabs at all corners to serve as a permanent demarcation.

342. *Grazing.*—The whole area will be closed to grazing.

CHAPTER XI—WORKING PLAN FOR THE REHABILITATION WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

343. This Chapter sets forth a fifteen year scheme for the rehabilitation of the Class III Reserved Forests of the division, transferred to departmental control from the management by Forest Panchayats in 1951. Odanthorai Reserved Forests in Mettupalayam Range is not dealt with here, as scheme for raising irrigated plantations in this Reserved Forest on a large scale is under consideration. In Chennimalai and Villikaradu Reserved Forest in Bhavani Range and in Modur Pettikutai Reserved Forest, fuel series have been opened and are dealt with in the Chapter on the Fuel Working Circle. With these exceptions, the Chapter covers all the Cass III Forests in this division. The distribution and area of these forests included in this Working Circle are as follows:

Range.	*Serial number.*	*Name of Reserved Forest.*	*Area in acres.*
Talamali	1	Velamundy	10,697·2
Mettupalayam	2	Modur Pettikuttai	5,147·57
	3	Nellimalai	1,312·10
Bhavani	4	Arachalur	1,082·31
	5	Vaypadi	439·44
	6	Kongampalayam	242·96
			18,921·40

The prescriptions contained in this Chapter closely follow the general scheme approved for the rehabiliation of the Ex-Panchayat Forests in the State. According to this scheme, different techniques of regeneration are adopted, with due regard to the edaphic factors, effectiveness, speed of the method and costs of restocking. Changes that may be approved by the Chief Conservator of Forests from time to time based on the experience gained must be given effect to in modifications given in this working plan.

344. *Position with regard to maps.*—The position with regard to the availability of maps for these forests is far from satisfactory. While unmounted copies were available for Velamundy, Chennimalai, Villikaradu, Kongampalayam and Voypadi Reserved Forests only cut and mounted maps were available for Modur-Pettikuttad, Nellimalai and Chennimalai Reserved Forest. References made to the various survey offices only met with the reply that copies were not available. In regard to Modur-Pettikuttai Reserved Forest, however, a full tracing of the map was obtained from an R. Dis. File in the District Forest Office and copy prepared. As for Nellimalai and Chennimalai, tracings of the different sections were taken, pasted together and a full copy taken.

345. Differences between the notified area and the computed area have been found in the case of Nillamalai and Modur Pettikuttai Reserved Forests. This matter may be taken up with the survey parties concerned by the District Forest Officer, differences reconciled and correct maps prepared.

SECTION 2—METHOD OF TREATMENT.

346. The Treatments proposed are based on the stock mapping of the forests carried out by a Range Officer on special duty assisted by a Forester. The stock-mapping was done on ocular estimation. While demarcating an area for one or other of the treatments the territorial staff will have the discretion to vary the treatment adopted according to practical convenience, as all the treatments aim at the common object of rehabilitation of the forest.

Technique No. I—Coppice Regeneration Series.

347. *Constitution of the series and basis of selection.*—Areas which contain an adequate number of active tree stumps, trees saplings and established seedlings sufficient to reclothe the forest if given protection, are included in this series. The total area available in the category is 4,760 acres and this has been formed into 3 series as shown below :—

Range.	*Name of Reserve forest.*	*Name of series.*	*Area in acres.*
(1)	(2)	(3)	(4)
Talamalai	Velamundy	Velamundy	2,331
Bhavani	Arachalur Kongampalayam Voypadi	Arachalur	1,254
Mettupalayam	Nellimalai	Nellimalai	1,175
		Total	4,760

348. ***Division into coupes.***—Each series has been divided into 15 annual coupes. The coupes have been so formed as to avoid a contiguous series of closed coupes opposite to villages. The following statement shows the division of coupes by series and their area :—

Technique No. I—Coppice Regeneration Series.

Range.	*Name of series.*	*Name of Reserve forest.*	*Coupe number.*	*Area in acres.*
(1)	(2)	(3)	(4)	(5)
Talamalai	Velamundy area—2,331 acres.	Velamundy	I	163
			II	165
			III	117
			IV	154
			V	165
			VI	119
			VII	157
			VIII	166
			IX	162
			X	158
			XI	176
			XII	158
			XIII	170
			XIV	139
			XV	162
			Total	2,331
Mettupalayam	Nellimalai	Nellimalai	I	77
			II	78
			III	78
			IV	79
			V	78
			VI	77
			VII	79
			VIII	78
			IX	79
			X	78
			XI	77
			XII	80
			XIII	80
			XIV	79
			XV	78
			Total	1,175

Technique No. I—Coppice Regeneration Series—cont.

Range. (1)	*Name of series.* (2)	*Name of Reserve forest.* (3)	*Coups number.* (4)	*Area in acres.* (5)
Bhavani	Arachalur area .. .. 1,254 acres	Arachalur Hill	I	83
		,,	II	84
		Voypadi	III	80
		Arachalur	IV	84
		,,	V	84
		Voypadi	VI	83
		Arachalur	VII	84
		,,	VIII	84
		Voypadi	IX	81
		Arachalur	X	83
		,,	XI	86
		Voypadi	XII	80
		Arachalur	XIII	87
		Kongampalam	XIV	85
		Arachalur	XV	86
			Total ..	1,254

***Abstract** for Coppice **Regeneration** Series.*

		ACRES.
1	**Velamundy series**	2,331
2	**Arachalur series**	1,254
3	Nellimalai series	1,175
	Total ..	4,760

SECTION 3—METHOD OF EXECUTING THE FELLINGS.

349. *Method of executing the fellings.*—One coupe in each series will be taken up annually in the sequence given in the above statement. The coupe will be sold in auction but if there is no bid, it should be worked departmentally. In the latter case, the villagers will be permitted to cut and remove the standing growth free of any cost as departmental exploitation will not be a paying proposition and the cost will be considerable. It should be remembered that the sole object of this treatment is to restock the area by coppice regrowth and hence the importance of proper coppicing cannot be overemphasized. It should be ensured by constant vigilance and zealous interest that every stump is coppiced properly, whether the coupe is worked by contract agency or departmentally. The rules of coppicing obtaining in the regular fuel coupes will be followed in these cases also.

350. *Period of fellings.*—The coupe shall be sold and work started sufficiently early so that the felling is completed before the end of May at the latest.

351. *Fencing.*—The approved rehabilitation proposals provide for barbed wire fencing but effort of the department to get barbed wire from the Union Government have been of little avail. In the circumstances reliance must be based on erecting a live fence under the protection of a dead fence. A dead fence can easily be formed with the thorny growth available in the coupes. Just inside the thorny fence about a yard away a two feet strip of soil will be worked to a depth of at least 9 inches and seeds of thorny species like *Acacias*, *Prosopis juliflora*, *Zizyphus* species will be dibbled at the commencement of the growing season. It is expected that given some attention these strips sown with thorny species will develop into good live fence in course of time.

352. The following programme is suggested for raising fences in advance of working :-

For the first coupes of these series when the fellings will be over and as soon as the rains fall, these beds for receiving seeds of thorny species will be prepared and seeds sown. In the same year, at the time of the North-East Monsoon similar peripheral strips for raising live fencing will be prepared roud coupes II, III and IV of all the series. The growth cut on these strips will be piled just away from its outer edge to afford some protection to the thorny growth. The seeds of thorny species will be dibbled in these strips at the commencement of the following South-West Monsoon. In the subsequent North-East Monsoon similar beds for raising live fencing will be raised round the periphery of coupe V of all the series followed up by dibbling of seeds in the subsequent South-West Monsoon. The following statement give the suggested programme :—

		For all series.	
Year.	*Coupe number.*	*Season preparation of bed for live fence.*	*Season dibbling of seed.*
(1)	(2)	(3)	(4)
1956 ..	.. I	First rains of South-West Monsoon on mango showers of 1956.	Commencement of South-West Monsoon of 1956.
1956 ..	.. II, III, IV ..	North-East Monsoon season.	Commencement of South-West Monsoon af 1957.
1957 ..	.. V	Do.	Commencement of South-West Monsoon of 1958 or if possible in 1957 North-East Monsoon season itself.

By following this procedure live fencing if at all satisfactorily raised will be two to three seasons old when the coupe comes up for felling. This live fencing may be augmented by cut fencing material available in the coupe when the coupe comes up for felling.

353. *Regeneration of small blanks.*—The essential feature of this system is that the area should be restocked with coppice regrowth. However there might occur within these coupe small tree blanks. These should be regenerated by the methods most suitable to the locality to be decided upon by the District Forest Officer.

354. *Grazing.*—The coupe will be closed to grazing for 5 years from the year of felling.

355. *Other regulations.*—All existing coppice regrowths should be cut back and recoppiced properly. Naturally regeneration below a girth of 2 inches and also sandal occurring in the coupe shall not be cut.

356. *Possibilities for Kumri.*—In the areas where *Kumri* work is possible and there is a demand for it, Kumri cultivation will be permitted at the discretion of the District Forest Officer on conditions obtaining for Kumri leases.

357. *Tending.*—A tending consisting in the cutting down of noxious growth which oppresses or interferes with the growth of fuel species and climber cutting, will be done in the second year.

358. *Execution of works and protection.*—The success of this system lies in the strict protection given. Experience elsewhere has shown that as a result of such a closure surprise crops of *Chloroxylon swietenia*, *Anogeissus latifolia* and other valuable species have developed from live root stock.

359. *Estimate of costs.*—The rough cost of the various items worked out per acre is furnished below. For details please see the detailed estimate given in the appendix.

ABSTRACT OF COST PER ACRE.

Technique No. I—Coppice Regeneration Series.

		RS.A.P.	
1	**Survey** and **demarcation**	0–4–6	per acre.
2	**Fencing**	3–0–0	,,
3	**Raising** live fence	1–6–0	,,
4	**Tending**	1–0–0	,,
5	**Assistant** to regeneration artificially	2–4–0	,,
6	**Miscellaneous**	0–2–6	,,
	Total ..	8–1–0	per acre or Rs. 8-06 np. per acre.

Technique No. II—Kumri Regeneration Series.

360. *Constitution of the series and basis of selection.*—These **areas** occur on the plains and contain mostly red loam **with very little or no boulders and are suitable for raising** tree species by "Kumri". **The area will be tackled on a rotation of thirty years** so that the **landless poor who will take to this type of roving cultivation will be** assured **of continued availability of land for Kumri. The following statement shows the** division of the **area into series by ranges :—**

Range. (1)	*Name of Reserved forest.* (2)	*Name of series.* (3)	*Area in acres.* (4)
Talamalai	Velamundy	Velamundy West	734
		,, Central	739
		,, **East**	966
Bhavani	**Kongam palayam** Voypadi ..	**Vijayamangalam**	**118**
Mettupalayam	**Modur Pettikuttai**	**Modur**	**50**
		Total ..	**2,607**

361. *Division into annual blocks.*—Each of the series has been **divided into ten** blocks, each **to be tackled once in three years** in the sequence **given in the following statement :—**

Range. (1)	*Name of series.* (2)	*Reserved forest.* (3)	*Block number.* (4)	*Area in acres.* (5)
Talamalai	Velamundy West area—734 acres.	Velamundy ..	I	73
			II	74
			III	74
			IV	71
			V	73
			VI	74
			VII	74
			VIII	72
			IX	74
			X	75
			Total ..	734
Talamalai	Velamundy Central Area—739 acres.	Velamundy ..	I	75
			II	75
			III	74
			IV	73
			V	74
			VI	74
			VII	74
			VIII	74
			IX	74
			X	73
			Total ..	739

Technique No. II—Kumri Regeneration Series—cont.

Constitution of the series and basis of Selection—cont.

Range. (1)	*Name of series.* (2)	*Reserved forest.* (3)	*Block number.* (4)	*Area in acres.* (5)
Talamalai ..	Valamundy East area—966 acres.	Valamundy ..	I	95
			II	89
			III	88
			IV	92
			V	68+45 (in 2 bits).
			VI	104
			VII	58+34 (in 2 bits).
			VIII	102
			IX	100
			X	65+26 (in 2 bits).
			Total ..	966
Mettupalayam ..	Modur	Modurpettikuttai ..	I	50 acres to be done in one year.
			Total ..	50
Bhavani	Vijayamangalam ..	Kongampalayam ..	I	12
			II	11
			III	12
			IV	11
			V	11
			VI	11
		Vaypadi	VII	12
			VIII	12
			IX	13
			X	13
			Total ..	118

Abstract of Kumri Regenation Series.

		Acres.
1	Velamundy West	734
2	Velamundy Central	739
3	Velamundy East	966
4	Modur	50
5	Vijayamangalam	118
	Total ..	2,607

362. *Method of treatment.*—The blocks will be divided into a suitable number of small units not exceeding five acres and allotted to the Kumridars who offer themselves to do this cultivation. Care should be taken to see that not more than five acres is allotted to each individual. The Kumridar will be permitted to fell and remove the standing growth in the area free of cost leaving sufficient material in the block for a good burning. The preparatory works should be completed well in advance of the South-West Monsoon. The Kumridar will be permitted to raise any field crop he wishes to cultivate and *Anacardium accidentale* (Cashewnut) will be the chief tree species for the Kumri area. An espacement of 33 feet by 33 feet will be adopted. The initial pitting work planting and subsequent after-care of the plants till he vacates the plot, will be the responsibility of the kumridar. Cashew seeds and seeding will be supplied by the department to the kumridar for initial planting and for the replacement of casualties.

363. *Fencing.*— A live fencing will be raised with the help of the kumridar and supplemented by dead fencing. When once the kumri lease is settled it might be possible to raise the live fences in advance as detailed for the coppice regeneration coupes.

364. *Nursery practice.*—Good quality seed nuts will be obtained from the West coast divisions and sown directly into cheap leaf containers filled with a mixture of red loamy earth and sand at the rate of one per basket. Where leaf containers cannot be obtained at rates cheaper than pots of the type used in current practice, the latter may be used. Watering may be done to the extent necessary but gradually decreased and sparingly done towards the end so as to make the plants hardy and drought resisting. Germination starts in about two weeks and the plants grow up to a height of 9 inch to 1 foot in six months. It is important that the baskets are placed on raised platforms supported on stakes so that they may not be in contact with the ground and perish.

2. The plants will be ready for planting when the fleshy coteyledonous leaves disappear and they should be planted when it is actually raining or about to rain or after heavy rains have fallen, without disturbing their root system. Even big size leaf cups *Donnais* (Tamil) have been used for this purpose in some divisions.

The objective is only to protect the seeds from rodent damage likely if dibbled straightaway.

It is enough if the seedlings are kept in these leaf cups till the fleshy coteyledonous leaves disappear a matter of thirty days or so.

365. *Period of lease.*—The Kumridar will be permitted to remain in the area up to five years.

366. *Other regulations.*—The rules with regard to security deposit or other matters obtaining now will apply for these leases also. However, if sufficient number of Kumridars are not forthcoming the collection of security deposit may be dispensed with at the discretion of the District Forest Officer so as to attract Kumridars. It must be made clear that the kumridar will not be entitled to the Cashew fruits and nuts which may appear in the raised plants in the later years of his kumri.

Casualties will be replaced as and when necessary up to and inclusive of the third planting season. It will be the responsibility of the kumridar to see that the plants are kept clean-weeded and soil worked and no other growth or field crop is allowed to grow around it to a radius of three feet. During the hot weather the plants may be given shade with Palmyrah leaves and also mulching. It is essential that the Cashew Plantation should be clean tilled throughout its life. It is expected that this can be achieved by leasing out the plantations for periods of five years at a time at market rates to the Kumridars themselves if they are willing. Otherwise they may be leased out to Co-operatives and other agencies. It is expected that these Cashew plantations should yield Rs. 100 per acre from their fifth year onwards.

367. *Grazing.*—The annual blocks will be closed to grazing for a period of five years.

368. *Costs.*—A rough estimate of costs worked out per acre is furnished herewith. For details please see the detailed estimate given in the Appendix.

Abstract of cost per acre.

		RS.A.P.	
1	Survey and demarcation	0–4–6	Per acra
2	Fencing	3–0–0	,,
3	Nursery work, including cost of baskets, seeds, watering, etc.	8–1–6	,,
4	Miscellaneous like transport of baskets seedlings, replacement of casualties, etc. ..	3–5–0	,,
	Total ..	14–11–0	,,
			or Rs 14·69 P. per acre.

Technique III.—Regeneration after tractor ploughing.

369. *Constitution of series and basis of selection.*—This treatment will be applied to all areas in the plains where Kumri cultivation will not be possible but containing a good admixture of rich loamy soil with loose boulders. The constitution of the series is as follows :

Range. (1)	*Reserved forest.* (2)	*Name of serie.* (3)	*Area in acres.* (4)
Talamalai	Velamundy.	Velamundy	1,285
Bhavani.	Kongampalayam ..	Kongampalayam	17
			1,302

370. ***Division into annual blocks.***—The Velamundy series has been divided into fifteen blocks and one block will be taken up every year in the sequence noted below. As regards Kongampalayam series, the area available is only seventeen acres and this will be tackled in the first year itself. The following statement shows the division of the series into annual blocks.

Range. (1)	*Name of series.* (2)	*Reserved forest.* (3)	*Block number.* (4)	*Area in acres.* (5)
Talamalai ..	Velamundy Area— 1,285 acres.	Velamundy.	I	81
			II	92
			III	86
			IV	82
			V	80
			VI	80
			VII	80
			VIII	82+83 (in 2 bits.)
			IX	28
			X	80
			XI	83
			XII	89
			XIII	76
			XIV	51+42 (in 2 bits.)
			XV	90
				1,285
Bhavani. ..	Kongampalayam.	Kongampalayam.	I	17 acres to be done in the first year.

*Abstract for Tractor **Ploughing** Regeneration Series.*

	acres.
1. Velamundy Series	1,285
2. Kongampalayam Series	17
Total	1,302

371. *Method of treatment.*—The standing growth in the area should be felled and removed by contract agency or departmentally before the end of May at the latest. On the fall of the first good showers in June-July, the area will be ploughed over with tractors, hired from the Agricultural Department. While ploughing, ridges will be formed at 33 feet intervals. The ridges will be 2 feet wide at the bottom, tapering to one foot at the top and the height will be one foot and run along contours. Where necessary these ridges will be broken to allow for the natural drainage of the locality to function. On the ridges good viable seeds of fuel species will be dibbled at intervals of 4 inches along their length. The following species are recommended; *Albizzia labbeck*, *Albizzia amara*, *Azadirachta indica*, *Butea frondosa*, *Dalbergia sissoo*, *Feronia elephantum*, *Hardwickia binata*, *Lannea grandis* *Inga dulcis*, *Syzygium jambolanum*. The virtue of the above species is that they provide good leaf-fodder. Where rodent damage to seeds is feared, seeds may be

dibbled in leaf cups (*Donnais*) (Tamil) and seedlings raised slightly ahead of the south-west monsoon in places where they can be protected from rodents and as near as possible to the regeneration area. These tiny seedlings before they outgrow the leaf cups may be put at intervals of a yard on the ridges, when it is actually raining or about to rain or has rained heavily.

372. *Fencing.*—Fencing will be put up in the manner described for coppice regeneration coupes.

373. *Raising cashew.*—Most of the area selected for this treatment is expected to be fit for Cashew. Whereever the areas are suitable, cashew will be raised in preference to other species, tiny seedlings raised in small containers being planted at intervals of 11 feet.

374. *Other regulations.*—The staff for regeneration purposes will be entertained on the scale mentioned in the approved scheme and employed for the period provided. They will be responsible for the weeding, soil working, tending replacement of casualties and all other works which are not covered by sanctioned estimates.

375. *Grazing.*—The annual blocks will be closed to grazing for a period of five years.

376. *Costs.*—A rough estimate of costs per acre for carrying out the various works under this treatment is furnished below: For details, please see the detailed estimate given in Appendix.

Abstract of cost per acre.

	RS.	A.	P.	
1 Survey and demarcation	0	4	6	per acre.
2 Thorn fences	3	0	0	Do.
3 Live fences	1	6	0	Do.
4 Tractor ploughing	12	0	0	Do.
5 Formation of ridges	4	8	0	Do.
6 Sowing etc.	1	8	0	Do.
7 Miscellaneous items	0	10	6	Do.
Total	23	5	0	or Rs. 23·31 P. per acre.

Techniques IV and V—" Sunken Mound " and " Trench and Mound " Regeneration Series.

377. *Basis of selection and constitution of series.*—The " Sunken Mound " treatment is applied to areas in the plains and foothill portions where tractor ploughing will not be possible and the " Trench and Mound " treatment to areas falling on hill slopes. These areas which occur in scattered bits in all the reserves have been constituted into one series with an area of 781 acres.

378. *Division into annual blocks.*—The series has been divided into 15 annual blocks to be regenerated at the rate of one block each year in the sequence given below :—

Range. (1)	*Reserved forest.* (2)	*Treatment.* (3)	*Block number.* (4)	*Area in acres.* (5)
Bhavani.	Kongampalayam.	Sunken Mound Method.	I	50
Do.	Vaypadi.	Do.	II	65
Talamalai.	Velamundy.	Do.	III	48
Do.	Do.	Do.	IV	45
Do.	Do.	Do.	V	59
Do.	Do.	Do.	VI	52
Do.	Do.	Do.	VII	50
Do.	Do.	Do.	VIII	50
Do.	Do.	Do.	IX	50
Do.	Do.	Do.	X	50
Do.	Do.	Do.	XI	43
Bhavani.	Kongampalayam.	Treanch and Mount Method.	XII	23
Talamalai.	Velamundy.	Do.	XIII	71
Do.	Do.	Do.	XIV	65
Do.	Do.	Do.	XV	60
			Total	781

Abstract on Sunken Mound and Trench and Mound Regeneration Series.

Sunken Mound: (Treatment No. 4) —

Velamundy Reserve Forest	447	acres.
Kongampalaym Reserve Forest	50	Do.
Vaypady Reserve Forest	65	Do.
Total ..	**562**	Do.

Trench and Mound: **(Treatment No. 5.)** —

Velamundy Reserve Forest	196	acres.
Kongampalayam Rererve Forest	23	Do.
Total ..	219	acres.
Grand Total ..	**781**	acres.

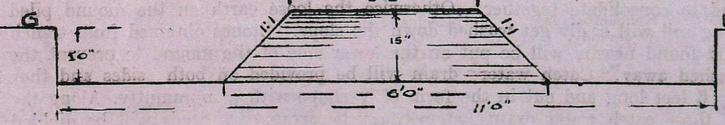
Method of treatment.

379. (*a*) " *Sunken Mound* ".—Lines 2 feet wide should be aligned along countours at intervals of 33 feet and cleared trenches 11 feet by 1 foot by 1 foot will be dug along the lines at intervals of 22 feet from mid point to mid point. The dug up-earth will be kept on one side and after complete weathering will be replaced in the trench but only over the mid central Section to form a raised flat mound on which seeds of the desired species are dibbled. The base of the mound should not be more than 4 feet. The length of the top of the mound will depend on the nature of the soil and its natural angle of repose (vide diagram). Top soil scraped from the sides may be put on the top of the mound to form a good bed. In other words, the mound will be formed inside the trench, not filling it, so that the rain water may collect in the unfilled portion of the trench. The advantage of this method is that the seeds will have prepared seed beds not less than 15 inches in depth and all available moisture will be fully conserved and made readily available to the plant. These trenches should be dug in the previous north-east monsoon season and the soil kept to a side in a manner in which their wash by rain will be reduced to the minimum. This can be done with the help of stones occurring plentifully in such localities. This work should be completed by January.

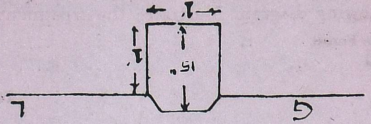
The excavated soil will be replaced in the trench in the manner described above by May to be ready for dibbling seeds at the proper time. Seeds will be dibbled to start with. At the commencement of north-east monsoon rains seedlings of hardy species which will stand straight transplanting, lake Neem, Albizzia lebbeck, Dalbergia sissoo, Tamarind will be planted in the mounds where dibbling have failed to show at least three vigorous seedlings at suitable intervals. The use of container plants will be discouraged as the technique involved is costly and time consuming and so not suited to cases where large areas have to be tackled. For providing seedlings for planting in failed mounds suitable nurseries will be raised at the proper time to provide suitable seized seedlings at the commencement of north-east monsoon.

The Cross-Section, Mid-Cross-Section and longitudinal Sections of the Sunken Mounds are drawn below :—

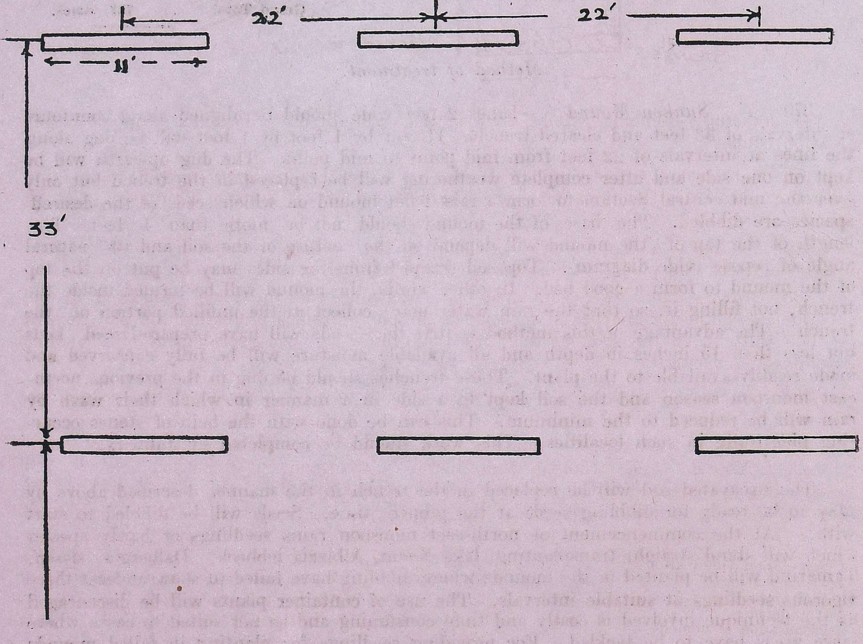
(*a*) LONGITUDINAL SECTION.



(*b*) CROSS SECTION.

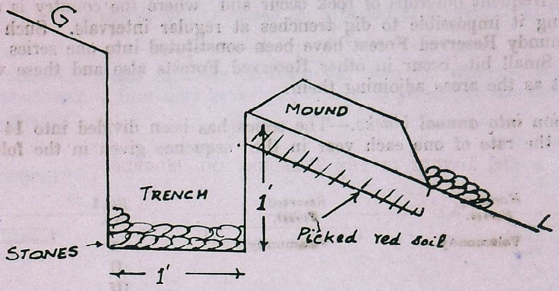


(*c*) LAYOUT OF THE TRENCHES AND MOUNDS.



(*b*) *The Trench and Mound Method.*—2 feet wide line spaced 22 feet apart will be aligned alnng contours and cleared of growth after which trenches of 11 feet by 1 foot by 1 foot will be dug along the lines at intervals of 22 feet from mid point to mid point. The digging of trenches should be completed during the previous north east monsoon.

The dug of soil will be heaped on the low hill side coextensive with the trench on the ground previously pickaxed. This will help the earth in the pickaxed portion and on the mound to consolidate together. Otherwise the loose earth on the mound piled on hard sloping soil will easily get washed down the slope. Stones obtained from trench excavation and found nearby will be put on the lower side of the mound to prevent the soil being washed away. Catch water drain will be provided on both sides and they may be up to 6 feet long and cut in the form of V shape with a mummutty. Along the lower side of these catch water drains, stones may be arranged. Seeds will be dibbled at the commencement of the rainy season of the year and resowing will be done as and when necessary. During the south-west monsoon rains and at the commencement of the north-east monsoon rains plants raised in containers will be planted in the mid section of these mounds. The following diagram illustrates the treatment :—



380. *Fencing.*—Fencing will be done in the manner prescribed for coppice Regeneration coupes.

381. *Nursery.*—A nursery will be raised at the proper season to provide plants for replacing casualties. The same procedure outlined for "Sunken Mounds" will be followed.

382. *Tending.*—A tending will be done in the second year when rank growths interfering with the plants will be removed and climber cutting carried out.

383. *Other regulations.*—Staff will be entertained on the scale approved in the sanctioned scheme for the period mentioned therein. Besides protecting the plot, it will be their duty to do the soil working, weeding, resowing and replacement of casualties as and when necessary.

384. *Grazing.*—The blocks will be closed to grazing for a period of five years from the start.

385. *Estimate.*—A rough estimate of costs per acre for carrying out the works under "Sunken Mound" and "Trench and Mound" treatments is furnished below: For details, please see the detailed estimate given in the **Appendix**.

Treatment IV—"Sunken Mound" Series.

	Per acre.		
1 Survey and demarcation	0	4	6
2 Thorn fencing	3	0	0
3 Live fence	1	6	0
4 Clearing lines	1	4	0
5 Preparation of mounds	11	14	0
6 Sowing etc.	1	8	0
7 Nurseries including cost of baskets, container and costs of watering, etc., etc.	7	2	0
8 Miscellaneous like transport of seedlings, etc., etc., replacing casualties:	1	10	6
Total ..	28	1	0 or Rs. 28 nP06 per acre.

Treatment V— "Trench and Mound" Series.

	Per acre.		
1 Survey and demarcation	0	4	6
2 Thorn fence	3	0	0
3 Live fence	1	6	0
4 Line clearing of strips	1	14	0
5 Preparation of trenches	17	13	0
6 Sowing seeds, etc.	1	8	0
7 Nursery including basket plants, watering, etc.	3	11	6
8 Miscellaneous items.	0	2	0
Total ..	29	11	0 or Rs. 29 nP69 per acre.

Technique VI—Hill Top and Bouldery areas.

Regeneration Series.

386. *Basis of selection and constitution of the series.*—This treatment is applied to areas where frequent outcrops of rock occur and where the country is strewn with boulders, making it impossible to dig trenches at regular intervals. Such areas which occur in Velamundy Reserved Forest have been constituted into one series with an area of 841 acres. Small bits occur in other Reserved Forests also and these will have the same treatment as the areas adjoining them.

387. *Division into annual blocks.*—The series has been divided into 14 blocks to be regenerated at the rate of one each year in the sequence given in the following statement: -

Range.	*Name of Series.*	*Reserved Forest.*	*Block No.*	*Area in Acres.*
Talamalai.	Velamundy.	Velamundy.	I	55
			II	57
			III	53
			IV	35
			V	53
			VI	51
			VII	50
			VIII	51
			IX	52
			X	50
			XI	70
			XII	65
			XIII	64
			XIV	75
				841

Abstract.

Velamundy ... ... 841 acres.

388. *Method of Treatment.*—Owing to the rocky nature of the country, it will not be possible to dig trenches of uniform size of 11 feet by 1 foot by 1 foot in these areas or have regular lines. Hence shorter trenches and mounds at approximately 22 feet should be dug wherever possible. When even such trenches cannot be dug regeneration work will be confined to pockets of soil. These pockets of soil will be prepared to a depth of at least 12 inches and spaced about 22 feet apart. Regeneration will be done on the lines mentioned for sunken mounds. *Anona squamosa* is a species best suited for such localities and should also be tried. This species is also not browsed by goats. Also the weightage should be in favour of thorny species in such inhospitable localities. Digging of trenches and pits should be done during the previous north-east monsoon and the trenches will be treated in the manner prescribed for "Sunken Mounds". Dibbling of seeds in the trenches and pits will be done at the commencement of the rainy season of the year and resowing will be done as and when necessary. The basketted plants will be put in, in the trenches, and pits during the south-west monsoon rains or at the commencement of the north-east monsoon.

389. *Fencing.*—Fencing will be done on the lines described earlier in this Chapter for Coppice Regeneration Coupes.

390. *Nursery.*—A nursery will be raised to provide seedlings for replacement of casualities on the lines prescribed for "Sunken Mounds" technique.

391. *Tending.*—A tending consisting of climber cutting and freeing the plants from oppressive plant growths will be done in the second year.

392. *Other regulations.*—Staff will be provided on the scale mentioned in the approved scheme and for the period necessary. Their duty will be to do the weeding, soil working, and replacement of casualties as and when necessary, and also do the tending in the second year.

393. *Grazing.*—The blocks will be closed for a period of 5 years from the commencement of work.

394. *Estimate.*—A rough estimate of costs per acre for carrying out the various works of this treatment is furnished below: For details please see the detailed estimate given in the appendix:

	PER ACRE.
1 Survey and demarcation	0 4 6
2 Thorny fence	3 0 0
3 Live fence	1 6 0
4 Clearing strip lines, etc.	1 14 0
5 Digging trenches and 1′ pits	6 12 0
6 Sowing	0 8 0
7 Nursery including raising of basket plants, watering, etc.	6 0 0
8 Contingencies, transport of seedlings, replacement of casualties, etc.	1 6 6
	21 3 0 or Rs. 21 nP 19 per acre.

395. *General.*—The regeneration techniques described in this chapter are all based on current experience. These should be followed till they are modified in the light of later experience or research. With experience it may be possible to decrease the length of the trenches, increase their rain water storage capacity. Wherever possible these trenches may be connected by shallow catch-water drains draining into the adjacent trenches to provide extra water. The aim is to rehabilitate the area successfully and at cheap costs.

CHAPTER XII—WORKING PLAN FOR THE IRRIGATED PLANTATIONS WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

396. *Constitution.*—An area of about 4,850 acres in Odanthorai Reserve Forest (total area 5,811.42 acres) is constituted into the Irrigated Plantations Working Circle. This former Panchayat Reserve Forest resumed by the department in 1951 is in an extremely degraded condition. The forest as a whole needs complete rehabilitation. A major portion of the Forest will be commanded by a countour canal from the Halur Halla. The situation, condition and terrain of Odanthorai Reserve Forest are exceptionally favourable for raising irrigated plantations.

397. *The water source.*—The Halur Halla is a perennial tributary of the Bhavani. It drains a considerable area of the eastern slopes of Nilgiris studded with tea and coffee plantations. In its lower reaches the Kengarai Pallam is one of the chief feeder streams of the Halur Halla and joins it at a height of about 1,300 feet above mean sea level. The most favourable take-off point for a canal appears to be a spot known locally as Gudukkamadugu at about 1,160 feet above mean sea level. At this spot the stream broadens to a width of 95 feet and a deep pool or ' Madugu ' is formed in its course. The Public Works Department has reported about the feasibility of the project. Very recently, Government orders have been received sanctioning the investigation and execution of the scheme.

SECTION 2—DIVISION INTO BLOCK AND COMPARTMENTS.

398. After the actual area commanded by the canal is ascertained, as the result of levelling division into blocks and compartments may be carried out.

SECTION 3—ANALYSIS AND VALUATION OF THE CROP.

399. The major portion of the forest falls under southern thorn forests type and a small area close to the stream in its upper reaches comes under the southern tropical dry deciduous type (according to Champion's preliminary classification).

SECTION 4—METHOD OF TREATMENT.

400. *Silvicultural System.*—The silvicultural system to be adopted will be clearfelling and artificial regeneration.

401. *Choice of species.*—As the main tree species, only teak will be raised at an espacement of 8½ feet.

402. *Rotation.*—In the Hulical teak plantations, experience has shown that the best rotation for pole production is twenty years and that beyond the age of twenty, casualties occur due possibly to lack of soil depth. Odanthorai Reserve Forest is situated under very similar factors of the locality. Further the facility for irrigation has to be availed of to the maximum extent. It is therefore prescribed that here too rotation will be twenty years.

403. *The Annual Coupe.*—Rough computations show that total area of 4,800 acres will be commanded by the canal along the alignment proposed. Only after the course of the canal is fixed, levelling over the whole area is done and the few isolated hillocks are excluded with the actual total area be known. Taking the total as 4,800 acres, the area of the annual coupe will be 240 acres.

404. *Sequence of coupes.*—The first coupe will naturally be situated nearest the diversion and will be a compact block.

405. *Clearfelling.*—There is practically no timber in the reserve and not much firewood. However, in view of the nearness to the town, the growth is expected to be saleable. The annual coupe will therefore be clearfelled through the agency of contractors during the year preceding the year of regeneration. Six months should suffice for the lease. The contractors will be required to clearfell all growth and remove the saleable produce except all growth 12 inches and below in girth which should be left at site for the burn. The contractor should vacate the area by the end of February.

SECTION 5—REGENERATION OPERATIONS.

406. *Burning.*—As soon as the material is dry, not later than the end of March, the area should be burnt. Due to the paucity of growth, only a patch burn may be possible. Wherever feasible, a reburn should be carried out early in April. Precautions should be taken to prevent the spread of fire outside the area.

407. *Formation of Subsidiary channel system.*—As huge areas have to be irrigated, the available water has to be utilised with the utmost economy. In the usual method of irrigation by flooding or percolation, ground absorption is likely to be immense and most of the water is wasted on the growth of weeds and ground vegetation. It is therefore for consideration whether it will not suffice if water is led along a minimum number of subsidiary channels, each to a cistern at the highest point in a block of 20 to 30 acres, and taken therefrom to the individual backward plant. The use of hoses may enable this as well as render feasible gravity irrigation over terrain with minor undulations; besides, this will make it possible to do saucer bunding around each stake and help to conserve the rain water. After all, the irrigation is intended only to supplement the low precipitation. The issue is open for decision, on the basis of the quantity of water available to the terrain, etc.

408. *Alignment and staking.*—The entire area will then be staked, at 8½ feet by 8½ feet. If it is decided to do saucer bunding, the saucers will be 4 feet square and have a one foot cube pit at the centre. Adjoining saucers will have a common berm. In the pits, the ash collected from the regeneration area will be mixed with the weathered soil from the pits and filled upto form a mound 6 inches above the ground level.

409. *Planting.*—Planting of teak stumps will be taken up with the first good showers during June-July and completed quickly. If casualties occur before canal water becomes available, they should be replaced. Water is expected to be available, for not less than four months from the end of September. With the commencement of water supply, no pit should be left without a live and growing stump as long as water is available.

SECTION 6—SUBSIDIARY SILVICULTURAL REGULATIONS.

410. *Tending.*—The pits should be weeded twice or thrice as found necessary. A mammutty scraping should suffice—and the surface of the saucer should be left undisturbed.

411. *Thinnings.*—An ordinary 'D' grade thinning will be done as prescribed in the chapter on Hulical Teak Plantations.

412. *Climber cutting.*—Along with every marking for thinning climber cutting should be done thoroughly, and wherever necessary, oftener.

SECTION 7—OTHER REGULATIONS.

413. *Demarcation.*—The limits of annual coupes will be marked in the field with stone slabs at all corners. If feasible, evergreen fire protection belts should be raised by sowing all round the plantation.

414. *Grazing.*—The whole area will be closed to grazing.

SECTION 8—CONTROL.

415. The control records prescribed in Section 11 under Chapter XIII will be maintained in the District Forest Office.

CHAPTER XIII—MISCELLANEOUS REGULATIONS.

SECTION I—FIRE PROTECTION.

416. *Intentional fires.*—Intentional fires are caused generally by graziers who burn the outer slopes year after year and sometimes by the unscrupulous shikari. As already observed in Chapter VIII, the powers to close areas subjected to repeated fires have been put to little or no use. It is necessary that these powers are utilised as direct measures cannot combat intentional fires.

417. The direct measures of fire protection proposed under the first working plan were drastically reduced about ten years back and further curtailed in 1955–56. The general fire protection operations should be restricted to plantations three years old and younger, and depots and buildings in reserved forests.

418. *Fire protection of sholas near Geddessal.*—The sholas above Geddassal settlement, viz., (1) Aiyanagiri shola and (2) Vodekhan Kanthavari and Dodakan group of sholas shall continue to be fire protected in the following manner :—

Two guide lines 10 feet wide shall be cut round the sholas leaving a 50 feet belt in between. The grass in the guide lines shall be cut down completely to ground level and the cut grass piled in the belt. The work of clearance shall be undertaken early in January and completed before the end of the month. By the middle of February when the grass in the guide lines is quite dry they will be first burnt very carefully and then the grass occurring between the guide lines shall be " early burnt " carefully, starting from near the upper guide line and then proceeding downwards. Care should be taken to see that this fire does not escape beyond the upper guide line.

SECTION 2—ROADS AND BUILDINGS.

419. *Maintenance of roads and traces.*—All roads and bridle path will be kept in proper repair. The Forest Engineer's traces will be kept cleared and maintained.

420. There is a proposal to hand over the Kempanaickenpalayam-Germalam Road to the Highways department for maintenance. The present condition of the road is unsatisfactory. Further under local development schemes, executed by the Revenue department, the Dhimbam-Kottadai Road has been taken up for repairs during 1955-56. These are welcome developments and the Chief Conservator of Forests has commended the former proposal to Government.

421. The road system to be constructed to facilitate bamboo extraction has been dealt with in the chapter on Bamboo Working Circle. Apart from this, the only road to be constructed is the Germalam-Sujjalkarai Road. This is very essential and has to be taken up early.

422. *Buildings.*—The construction of the following rest houses and residential buildings is already proposed or under active consideration :—

(1) Inspection sheds at Andhiyur and at Talamalai.

(2) Construction of forester's quarters at Kadambur, Talamalai.

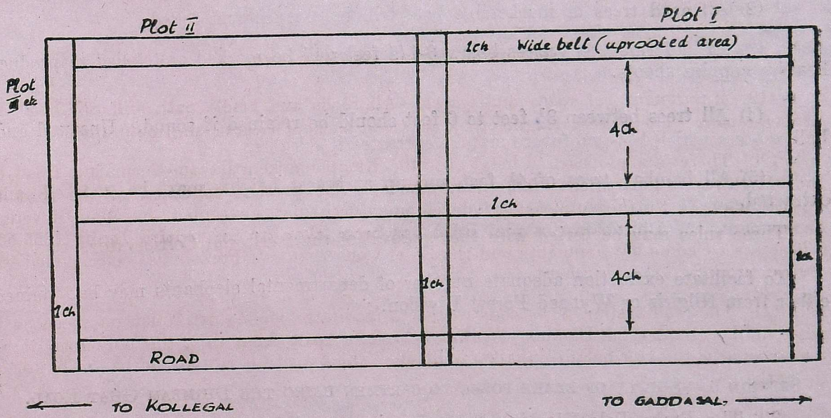
These have to be taken up early. Staff stationed on the plateau have generally no quarters. This should not be neglected. The provision of sanitary installations to rest houses and residential buildings has been already taken on hand and being pushed through.

Section 3—Reafforestation of the former Germalam Fuel Series.

423. In 1942–43 Germalam Fuel Service in Satyamangalam Range was constituted as one of the Reserve series which were formed to meet the war time demand for charcoal for producer gas vehicles. Out of a total area of 2,345 acres, four compartments of an area of 1,064 acres were worked. Further working were stopped from 1952–53 onwards under the orders of the Chief Conservator of Forests. Timber and Minor Forest Produce trees such as Rosewood, Vengai, *Albizzia adaratissima* and gallnut were left as standards. The worked coupes adjoin theKollegal Road and lie in area of rank sword grass which tends to suppress all natural regeneration and to render any effort at artificial regeneration futile, owing to suppression and the fire hazard. From 1953, experimental attempts to restock the area with *Eucalyptus*, *wattle*, *Cedrella tonna*, and *Bombax malabaricum* have been made. Wattle did not succeed but Eucalyptus did to some extent. The other species were raised only during 1955 and it is too early to access the results.

424. There is scarcely any case for raising plantations of the less valuable species like Eucalyptus. More so, as enumeration of several indicator plots in the grassy areas showed that the area abounds in seedlings and saplings of *Terminalia chebula*, *Pterocarpus marsupium* and *Alibizzia Odaratissima* and root suckers of rosewood. These die back year after year due to the severe fires which occur in the locality and take a heavy toll not only of young advance growth but even of big gallnut and other trees. The retrogression of the area is rapid and has to be checked.

425. If the young advance growth can only be effectively fire protected, a crop of gallnut and other species far superior to the species now attempted to be grown, can be raised. Accordingly, the following experiment is prescribed to be carried out over an area of 25 acres in Germalam fuel series, just above the Kollegal Road. Five acres will be taken up annually. The plots will have one side along the road, five chains long and have a width of ten chains. Over two one chain belts parallel to the road, the grass will be completely uprooted as shown in the sketch. So also over one chain on either side of the I plot and on one side of the II plot. Within the plot itself, the grass will be cut and removed away from it before the fire season.



Section 4—Kumri regeneration.

426. In the past Kumridar was permitted to remain in the area only for one year and so kumri cultivation was not very popular.

427. Now three year Kumri leases are straight away permitted in the former panchayat forests. In the class I forests such leases are given one year at a time, upto three years with this change it is expected that there will be good demand for Kumri cultivation. The localities for Kumri in the former panchayat forests are prescribed in the chapter on the Rehabilitation Working Circle. In class I forests too there is excellent scope notably in Nayakampalayam and Velliangad beats in Mettupalayam Range and in Ennamangalam Reserved Forest in Bhavani Range. The utmost use must be made of the possibilities from 1956-57 onwards. Cashew may be planted at 33 feet by 33 feet in all suitable localities within the actual area allotted. Palmyrah may also be sown at 11 feet by 11 feet if there is demand for the manufacture of its jaggery. A great deal of enthusiastic work on the past of the district staff can achieve remarkable results. The success of the 1953 kumris in Velamundy Reserved Forest and of the Nayakampalayam and Shanar kumris is proof enough of this.

SECTION 5.—TIMBER AREAS IN THE DIVISION.

428. Timber trees of exploitable size are confined to a few favourable localities. These are the Minchigully valley, Tattavadi block and the Gudri area in Satyamangalam Range and the Talakarai and Kongadai beats in Bhavani Range. In the Tattavadi area, two selection coupes were worked during 1953-54 and 1954-55 through the contractors agency and one coupe worked departmentally during 1955-56. In future also departmental operations may be undertaken whenever it is profitable to do so but contractors agency is not precluded and the District Forest Officer may in consultation with the territorial Conservator, decide on the agency and on the mode of working each year. As the areas are not extensive it was not possible to form a complete series of selection coupes. About 200 trees may be worked in each locality annually.

429. The following marking rules are suggested :—

(1) All trees above 6 feet in girth at breast height will be marked and felled.

(2) All dead trees of marketable bole will be marked and felled.

(3) All deformed teak trees below 3-1/2 feet will be marked and felled to produce healthy coppice shoots.

(4) All trees between 3½ feet to 6 feet should be retained if sound. Unsound and hollow trees which have no future may be extracted if saleable.

(5) All bambax trees of 4½ feet and up at breast height may be marked and extracted.

These rules may be varied with the approval of the territorial Conservator.

To facilitate extraction adequate number of departmental elephants may be obtained either from Nilgiris or Wynaad Forest Division.

SECTION 6 —SUPPLY OF BRAKE POLES TO CARTMEN USING THE DHIMBAM GHAT ROAD.

430. The Brake Pole Working Circle has been abolished in order to stop further exploitation of the poor timber stand in the Dhimbam area hitherto set apart for the purpose. Arrangements will be made henceforth to supply brake poles made of bamboo butts to cartmen through the tea shop-keeper at Dhimbam on a commission of one anna per brake pole. Bamboo brake poles will be supplied by the contractor of the current coupe in Hassanur Bamboo series to the tea shop-keeper at three annas per brake pole and the rate of issue to cartmen will not exceed four annas per brake pole.

SECTION 7—SANDAL SALE DEPOT AT SATHYAMANGALAM.

431. The Sandalwood Sale Depot at Sathyamangalam will continue to be in charge of a separate depot ranger. The depot will be maintained in accordance with the revised sandal felling rules. Precautions against fire will be strictly observed.

SECTION 8—RAIN GAUGES.

432. The correct maintenance of rainfall statistics at the existing rain gauge stations in the division is prescribed. The measurement of the rainfall should be made preferably by a forester at intervals of not more than a week. A monthly statement of rainfall at the various stations must be submitted to the Distirct Forest Officer by the Range Officers concerned. For Mettupalayam the rainfall figures must be periodically obtained from the department concerned and incorporated in the range and district registers.

SECTIOON 9—STORES, TOOLS AND PLCNT.

433. The routine expenditure on the purchase of and repair to stores, tools and plant will be incurred.

SECTION 10—POLITICAL BOUNDARY.

434. The present arrangements for the verification of the common frontier boundary between Coimbatore district and Mysore State on a three year cycle shall be continued. Details of the sections to be verified annually are given in Chapter I.

SECTION 11—CONTROL RECORDS AND MAPS.

435. There will be simple forms to control each major activity prescribed under the working plan. Each important cultural operation will have its own simple control form instead of appearing with numerous other entries in the record of works. The record of works will deal with comparatively minor prescriptions or routine matters. All forms will be foolscap size in loose leaf files. The prescriptions for the whole working plan period will be written up by the Working Plan Officers in these forms and supplied to the District Forest Officer for maintenance. The following control forms are therefore prescribed:—

Reserve Sandal Working Circle—

Control of fellings.

Fellings series journal.

Control map. (The year of working of each coupe and the outturn of rough cleaned wood realised will be entered in the detailed map accompanying this plan.)

Village Sandal Working Circle—

Control book.

Felling series journal.

Fuel Working Circle—

Control of feelings.

Record of yield from fellings.

Record of works.

Control maps.

Shanar Polard Working Circle—

Control of fellings.

Record of works.

Confrol map.

Bamboo Working Circle—

Control of fellings and yield.

Small Timber Working Circle—

Control of fellings.
Control map.

Grazing Working Circle—

Control book.

Minor Forest Produce Working Circle—

Control book.

Teak Pole Working Circle—

Control of fellings.
Control of regeneration operations.
Control of thinnings.
Plantation Journal.
Control map

Rehabilitation Working Circle—

Control of regeneration operations.
Plantation Journal.
Control map.

Irrigated Plantation Working Circle–

Plantation Journal.
Control of regeneration operations.
Control of thinnings.
Control map.

Miscellaneous Working Circle—

Record of works.

Samples of these forms are given in the Appendix.

436. Control maps prescribed above will be maintained as follows :—

Fuel Working Circle.—Details of working of the various fuel coupes such as area, year of working limits of the area leased, limits of the actual area worked will be shown on the control maps on 4 inches=1 mile scale.

Shannar Pollard Working Circle—Same as for Fuel Working Circle.

Small Timber Working Circle.—The details of working will be shown on the control map 1 inch=1 mile scale.

Teak Pole Working Circle.—Details of the areas felled and planted up will be shown on separate control may on 4 inches=1 mile scale.

Rehabilitation Working Circle.—All the areas brought under the different treatments prescribed and regenerated will be shown on maps on 4 inches = 1 mile scale and each treatment should be clearly distinguishable.

Irrigated Plantation Working Circle.—The areas annually planted will be shown on large scale maps 16 inches = 1 mile.

Separate control maps as follows will also be maintained for the following under miscellaneous regulations :—

(*a*) *Fire Maps.*—Separate fire maps should be maintained for each Range showing therein the cart-tracks, foot-paths and boundaries prescribed in the Working Plan and also the areas burnt by fire in each year.

(*b*) the experiment in the afforestation of grassy areas near Geddassal (4 inches= 1 mile scale).

(*c*) the exploitation timber areas in the division (4 inches=1 mile scale).

(*d*) Kumari Regeneration area in the division.

437. Control journal for each of the Working Circles will also be maintained, the headings for which will be found in Appendix.

438. A deviation register in the form given in appendix will also be maintained for the whole working plan.

CHAPTER XIV—ESTABLISHMENT AND LABOUR.

SECTION 1—ESTABLISHMENT.

439. The prescriptions in the Chapters on the Rehabilitation Working Circle and the Halur Irrigated Plantations Working Circle will mean considerable expansion of the activities of the divison. The latter will require a separate Range with headquarters at Mettupalayam and the normal complement of Range Staff. The rehabilitation of the former Panchayat forests is also a big undertaking. Fortunately, Velamundy Reserved Forest in Talamalai Range accounts for more than half the area of the ex-Panchayat Forests, facilitating concentration of attention. In this Reserved Forest Cashewnut Kumries on a very big scale has already been taken on hand during 1956 and all the other treatments as proposed only for parts of this Reserve. As soon as a major part of the regeneration treatments are commenced in this Reserved Forest the question of engaging adequate additional staff should be taken up.

440. *Ministerial Establishment.*—In the District Forest Office, temporary posts have been continued for a long period of years, and it is suggested that steps should be taken to make such posts permanent. Proposals have gone up for sanction of some more staff for the District Forest Office, in view of the large increase in work in recent years and orders are awaited.

441. *Mode of recruitment.*—Since the Post-War Years, recruitment to the ranks of Foresters, Forest Guards and Reserve Watches is done through the Employment Exchange, Coimbatore. It is the general experience that the town dwellers who are usually sent up for selection are often unsuited for the hard forest life. Hardy men from the rural parts who have more knowledge of and interest in agriculture will be far better suited. Recruitment from the hill tribes will be even more apt, especially for the hill beats, and has apparently been discontinued for a number of years, as they are usually illiterate. But now that schools have been opened even in remote parts this may no longer be an impediment and it is suggested that literate persons belonging to hill tribes may be given preference especially in hilly beats.

442. Lately (in January 1956) the concurrence of the Sub-Regional Employment Exchange Officer has been obtained for a new procedure recommended by the Chief Conservator of Forests. Under this, applicants for the posts of Guards and Watchers from the hill tribes and rural parts appear for interview. Postal registration of suitable and qualified applicants who are not already registered in the Exchange is arranged by the District Forest Officer. On registration the applicants are duly appointed. The new procedure may be expected to tone up the quality of the beat staff in due course.

SECTION 2—LABOUR.

443. The Forest Settlements of Sholagars and Irullars continue to be the most important source of labour supply in the hills. It should be the constant endeavour of all ranks in the Department to see that the Settlements prosper. The District Forest Officer and the Range Officers need to take personal and active interest in the welfare of the Hill Tribes. Official agencies such as the Department of Harijan Welfare, Government of Madras and non-official agencies, such as The Kasturba Gandhi National Memorial Trust have entered the filed in recent years and taken up amelioration work. Their work combined with the formation of multi-purpose tribal co-operative societies as proposed in the chapter on the Minor Forest Produce Working Circle should in course of time materially raise the standards of living of the hill tribes and make them useful members of the community.

CHAPTER XV—FINANCIAL FORECAST AND COST OF THE WORKING PLAN.

SECTION 1—FINANCIAL FORECAST.

444. The estimated revenue and expenditure during the period of the working plan and an abstract of the forecast are given in the following statement. Between forecast and actuals, quite considerable variations may occur, according to fluctuations in the price of sandal.

445. The estimates show an annual surplus of Rs. 6,08,117, which is very satisfactory indeed. How far this degree of profit will be maintained in the long run, will depend to a considerable extent on the complete extraction of sandal from the annual coupes and on the success of the new policy for village sandal.

Abstract of financial forecast for the fifteen-year period, 1956–57 to 1970-71.

Revenue.		*Expenditure.*		
Serial number and particulars	*Amount expected to be realised.*	*Serial number and particulars.*	*Amount expected to be expended.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)
	RS.		RS.	
1 Sandalwood	80,32,500	1 Exploitation of sandal and teak, etc.	3,92,025	..
2 Timber	2,53,125	2 Regeneration	21,500	..
3 Bamboos	13,50,000	3 Fire protection	6,765	..
4 Fuel	8,00,000	4 Roads and bridges (including maintenance of existing roads).	2,69,000	..
5 Minor Forest Produce ..	4,87,500	5 Buildings, wells (maintenance of existing buildings and wells, etc.)	1,73,150	..
6 Grazing	4,30,500	6 Miscellaneous (including rewards, temporary establishment, etc).	3,06,690	..
7 Miscellaneous	3,85,500	7 Pay and allowances inclusive of contingent expenditure.	14,49,045	..
Total ..	1,17,39,925	Total ..	26,18,175	
		Anticipated surplus of revenue over expenditure during the 15 year period.	91,21,750	
		Annual anticipated profit	6,08,117	

Financial forecast for the fifteen-year period 1956–57 to 1970–71.

Revenue.				*Expenditure.*			
Nature of item. (1)	*Rate.* (2) RS.	*Amount.* (3) RS.	*Remarks.* (4)	*Nature of item.* (1)	*Rate.* (2) RS.	*Amount.* (3) RS.	*Remarks.* (4)
I. Reserve Sandal Working Circle—				*I. Reserve Sandal Working Circle—*			
By sale of 1,440 tons of sandal wood.	3,500	50,40,000 (Actual per ton average of the last three years).	A rough forecast of an annual yield of 100 tons of rough cleaned wood has been adopted. This is taken to yield 96 tons of final cleaned wood.	For the production of 1,440 tons of final cleaned sandal wood.	80	1,15,200	
II. Village Sandal Working Circle—				*II. Village Sandal Working Circle—*			
By sale of 855 tons of sandalwood obtained from unreserves and patta lands.	3,500	29,92,500	A rough forecast of an annual yield of 60 tons of rough cleaned wood (or 57 tons of final cleaned wood) has been adopted.	1. For the production of 855 tons of final cleaned sandalwood from the unreserves and patta lands.	80	68,400	
				2. Payment of compensation.	10,000 per year.	1,50,000	Based on the average of the actual compensation during the last 10 years.
III. Fuel Working Circle—				*III. Fuel Working Circle—*			
By sale of 19,570 acres of fuel forest.	40 per acre (Average of last three years.)	7,82,800	..	1. Survey and demarcation of 315 fuel coupes.	25 per coupe.	7,875	
				2. Cost of planting coupe stones. (About 1000 coupe stones for 315 coupes.)	6 a stone.	6,000	
IV. Shanar Pollard Working Circle—				*IV. Shanar Pollard Working Circle—*			
By sale of head loads of branchwood fuel on permits to the shanar community.	1,200	18,000	..	Survey and demarcation of 30 coupes.	750 (RS. 25 per coupe).	11,250	
				Cost of coupe stones (50 stones for 30 coupes).	6	300	

Financial forecast for the fifteen-year period 1956–57 *to* 1970–71—cont.

Revenue.				*Expenditure.*			
Nature of item. (1)	*Rate.* (2) RS.	*Amount.* (3) RS.	*Remarks.* (4)	*Nature of item.* (1)	*Rate.* (2) RS.	*Amount.* (3) RS.	*Remarks.* (4)
V. Bamboo Working Circle—				*V. Bamboo Working Circle—*			
By sale of bamboos in the division.	70,000	13,50,000		Nil.			
VI. Small Timber Working Circle—				*VI. Small Timber Working Circle—*			
By sale of 1½ lakhs plough shares.	3 annas per plough share.	28,125	The number of ploughs required annually on the plateau has been estimated to be about 10,000. A round figure of 1,50,000 has been adopted in the calculation.	Nil.			
VII. Grazing Working Circle—				*VII. Grazing Working Circle—*			
By sale of grazing permits.	28,700 per annum.	4,30,500		Improvements to grazing grounds over 500 acres every year.	5,200 per year.	78,000	
				Repairs to the existing wells and tanks in the grazing grounds. (Average of last 10 years).	300	4,500	
VIII. Minor Forest Produce Working Circle—				*VIII. Minor Forest Produce Working Circle—*			
By sale of minor forest produce items.	31,500	4,72,500		Cost of departmental collection of honey, wax, deer and sambhur horns and Ivory.	200	3,000	
By sale of honey and wax and deer and sambhur horns.	1,000	15,000					
IX. Teak Pole Working Circle—				*IX. Teak Pole Working Circle—*			
1. By sale of poles, timber, etc., obtained from final felling of a plantation of average annual area 2½ acres.	5,000	75,000		For clear felling and formation of plantation.	200	3,000	
				For conversion of felled stock	200	3,000	
2. By sale of materials obtained from thinnings (intermediate yield).	200	Nil.		For thinning of plantations.	100	1,500	

X. Rehabilitation Working Circle—		
(Sale of standing growth is the only revenue item, but the growing stock is so poor generally that no revenue is likely to be realised by sale).	Nil.	–
XI. Miscellaneous Sources—		
1. Revenue realised for fines and forfeitures, land leases, rents in buildings, drift and waif wood, refunds and other sources.	25,700 per annum.	3,85,500
2. For sale of timber extracted from the Thattavadi block and other timber areas in the division.	25,000 for six years.	1,50,000

X. Rehabilitation Working Circle—		
For raising nurseries for cashewnut and other kumri work.	800 per annum.	12,000
XI. Miscellaneous Sources—		
1. For extraction of timber.	5,000 for 6 years.	30,000
2. Miscellaneous experiments.	5,000 for the plan period.	5,000
Fire Protection—		
(*a*) Mysore frontier line 15½ miles.	200 per annum.	3,000
(*b*) Fire protection of sholas in Satyamangalam Range.	80 per annum.	1,200
(*c*) Fire protection of plantation at Geddessal.	130 per annum.	1,950
(*d*) Fire tracing cart stands in Talamalai Range.	6 per annum.	90
(*e*) Fire protection of irrigated teak plantation.	35 per annum.	525
		6,765
Stores—		
Purchase of stores, tools, etc. Items common to all working circles—Past 3 years average.	425 per annum.	6,375

Financial forecast for the fifteen-year period 1956–57 to 1970–71—cont.

Revenue.				Expenditure.			
Nature of item. (1)	*Rate.* (2) RS.	*Amount.* (3) RS.	*Remarks.* (4)	*Nature of item.* (1)	*Rate.* (2) RS.	*Amount.* (3) RS.	*Remarks.* (4)
				XI. Miscellaneous Sources—cont.			
				Communication and buildings—			
				(*a*) Roads—New Works—			
				Pulinjur—Thattavadi timber area road—3 miles at Rs. 1,000.	3,000	3,000	
				Hassanur—Chickalli road—About 12 miles at Rs. 1,000 per mile.	12,000	12,000	
				Kadambur—Gundri road—About 14 miles at Rs. 1,000 per mile.	14,000	14,000	
						29,000	
				(*b*) Maintenance of existing roads—length 95 miles, 3 furlongs—past 3 years average is adopted.	16,000	2,40,000	
				(*c*) *Buildings—New Works—*			
				Staff quarters at Satyamangalam.	12,500	..	
				Talamalai Range Officer's quarters at Satyamangalam.	10,000	..	
				Forester's quarters at Kadambur.	6,000	..	
				Inspection shed at Talamalai.	9,000	..	
				Forester's quarters at Talamalai.	5,000	..	
				Sub-line at Jeergahalli ..	3,000	..	
				Sub-line at Talamalai ..	3,000	..	
				Construction of Rest house at Andhiyur.	9,000	..	
				Construction of subordinates quarters at Andhiyur.	10,000	..	
				Laying out a pipe line at Kunjapanai.	2,000	..	
				Quarters at Coimbatore for office staff.	30,000	..	
					99,500	99,500	

(*d*) Maintenance of existing buildings—Past 3 years average is adopted.	4,500 per annum.	67,500
(*e*) Maintenance of existing wells.	100 per annum.	1,500
(*f*) Maintenance of Rain Gauge Stations.	10 per annum.	150
***Miscellaneous*—**		
Establishment—Controlling Staff—		
(*a*) District Forest Officer.	509 per month.	91,620
Executive Staff—		
(*b*) 6 Rangers inclusive of Depot Range Officer and plantation Range Officer.	192 each per month.	2,07,360
(*c*) Twenty-seven Foresters.	69 each per month.	3,35,340
Protective Staff—		
(*d*) Sixty-eight Forest guards (53 for beat charge and 15 for special duty).	26 each per month.	3,18,240
(*e*) Office Establishment (Permanent)—		
One Head Clerk—Rs. 80—3—92—5—110.	101 per month.	18,180
One Accountant—Rs. 80—3—92—5—110.	101 per month.	18,180
Four Clerks on Rs. 45—3—60—2—90.	67/8 per month each.	48,600
One Typist on Rs. 45—3—60—2—90.	67/8 per month. each.	12,150

Financial forecast for the fifteen-year period 1956-57 to 1970-71—cont.

Revenue.				*Expenditure.*			
Nature of item.	*Rate.*	*Amount.*	*Remarks.*	*Nature of item.*	*Rate.*	*Amount.*	*Remarks.*
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	RS.	RS.			RS.	RS.	
				XI. *Miscellaneous Sources*—cont.			
				(*e*) Office Establishment (Permanent)—*cont.*			
				One Draughtsman on Rs. 55—3—100.	80 per month each.	14,400	
				(*f*) Range Establishment—			
				Four Range Clerks on Rs. 45—3—60—2—90.	67/8 per month. each.	48,600	
				Temporary Establishment—			
				(*g*) Three Clerks to cope up with the increased work and two Clerks for dealing with the greater number of offence reports.	67/8 per month each.	60,750	
				(*h*) Reserve Watchers—54 Reserve Watchers.	10 per month each.	97,200	
				(*i*) Two bungalow Watchers at Rs. 6/8 each per month.	6/8 per month each.	2,340	
				(*j*) Two Watchers for Conservator's plots.	13 per month each.	4,680	
				(*k*) One Sandalwood Clerk.	33 per mensem.	5,940	
				(*l*) One Permit Clerk.	31 per mensem.	5,580	
				(*m*) Two Depot Watchers for sale depot.	12 per month each.	4,320	

(n) Menials—		
Ten peons (4 for D.F.O's office, 6 for Ranges Rs. 18-1-25).	22/8 per month each.	40,500
(o) Motor Driver.	41 per mensem.	7,380
Allowances—		
Travelling allowances, fixed travelling allowance, other compensatory allowance, etc. Past three years average is Rs. 17,654 ; but it is limited to Rs. 17,000 per annum.	17,000 per annum.	2,55,000
Contingencies—		
Supplies, services, etc. Past three years average is Rs. 4,701; but it is fixed at Rs. 5,000 per annum.	5,000 per annum.	75,000
Direction—		
Annual cost of Conservator and his establishment is estimated to be Rs. 48,000.	..	..
There are six divisions in the Circle—So one-sixth of the total cost is debited to this division.	8,000 per annum.	1,20,000

SECTION 2—COST OF THE WORKING PLAN.

446. The cost of the working plan is Rs. 88,137. The following statement shows the details of expenditure :—

	Particulars.	*Amount.* RS.	A.	P.
(*b*)	1. Works	1,430	5	6
(*c*)	(ii) Establishment—			
	(1) Pay of Officers—Voted	10,700	0	0
	(2) Pay of Establishment	16,847	3	0
	(3) Dearness Allowance	7,727	13	0
	Fixed Travelling Allowance	1,555	11	0
	House Rent Allowance	380	5	0
	Other Compensatory Allowance	463	7	0
	Travelling Allowance—Voted	11,718	2	0
	Contingencies (Stamps, pay, etc., of menials, etc.)	1,891	8	3
	Proportionate cost of Conservator of Forests and his staff	35,422	10	0
	Total cost of the working plan	88,137	0	9

The cost of the plan per acre is Rs. 0–16 Paise.

PART II.

SUMMARY OF PRESCRIPTIONS.

FUTURE MANAGEMENT—DISCUSSED AND PRESCRIBED.

CHAPTER I—BASIS OF PROPOSALS.

The National Forest policy of India quoted.

a

paragraph number

General objects of management.—The objects of management are (1) to exploit the resources of the forest in respect of sandal bamboo-firewood and minor forest product with due regard to silvicultural principles; 150-151

(2) to augment the natural resources of the forests through artificial means; ... ...

(3) to meet legitimate local demands for particular items of forest produce; and ... ...

(4) to ensure the realisation of the maximum sustained financial return from the forests ... ...

Methods of treatment.—Sandalwood trees will be exploited on the natural selection system. The exploitation of the fuel forests will be under the simple coppice system. Bamboos will be worked on the bamboo selection system. The needs of the villagers for small timber and of the shanars for faggot wood will also be met with. Regulation of grazing, penning and improvements of working facilities. Production of electric transmission poles from the irrigation teak plantations on Hulical drug. 152-153

Utilization of the irrigation facilities in Mettupalayam Range for the production of valuable commercial timber such as teak. Reclothing of the isolated panchayat forests ... ...

Working Circles.—The following eleven working circles have been constituted 154

Serial number.	*Name of the working circle.*	*Area in acres.*
1.	Reserve sandal working circle	2,02,944
2.	Village sandal working circle	95,024·04
3.	Fuel working circle	42,118·50
4.	Shanar pollard working circle	3,345
5.	Bamboo working circle	1,93,618
6.	Small timber working circle	58,128
7.	Grazing working circle	The whole division.
8.	Minor Forest produce working circle	Do.
9.	Teak Pole working circle	46
10.	Rehabilitation working circle	18,921
11.	Irrigated plantations working circle	5,811·42

Period of plan.—This working plan will be in force for fifteen years from 1st April 1956 155

CHAPTER II—RESERVE SANDAL WORKING CIRCLE.

Summary.

Constitution and Area.—The working circle includes all the sandal areas in the reserved forests of the division. Its area is 90,000 acres 156

Felling series.—The working circle is divided into fifteen felling series. 157

Character of vegetation.—Analysis and valuation of the crop. No fresh analysis and valuation is made. The capital value of the growing stock is estimated to be Rs. 30,22,800 158-159

	Paragraph number
Method of treatment.—The silvicultural system adopted is natural selection system	**160**
Felling cycle.—The felling cycle adopted will be 6 years	**161**
Coupes.—Each felling series is divided into 6 annual coupes. No assurance of uniform outturn	**162**
Possibility.—The possibility of the working circle is fixed at 100 tons of rough cleaned wood per annum	**163–166**
Method of executing fellings.—The working will be regulated by area. One coupe will be worked in each year in each series	**167**
Emergency regulation.—The territorial conservator may reduce the felling cycle to 3 years if spike disease is virulent	**168**
Agency of felling.—The exploitation of sandalwood should be carried out departmentally	**169**
Felling rules.—Removal of all dead trees including sapwood trees should be carried out. Strict adherence of the time-table by District Forest Officer. The District Forest Office should see that the whole coupe has been gone over and all dead sandal trees extracted	**170**
Annual programme of operations.—The sandalwood extraction work should be completed by the end of December. Rush of consignments of rough cleaned sandalwood in Satyamangalam Sandalwood depot during January to March should be avoided. The schedule should be kept up and hasty execution of works in all stages should be avoided	**171**
Supply of implements to mazdoors.—The supply of efficient pick axes, hand saws and *Adzes* to the mazdoors will speed up the progress of extraction work which is often handicapped by the mazdoors not having good implements	**172**
Tabular statement of fellings.—A tabular statement showing the coupes to be worked in successive years in each felling series is given	**173**
Retail sale of sandal billets.—Provision is made for the retail sale of sandalwood billets for bonafied domestic use at Coimbatore Bhavani, Mettupalayam and Satyamangalam	**174**
Fire protection.—No special measures of fire protection for this working circle	**175**

CHAPTER III—VILLAGE SANDAL WORKING CIRCLE—SUMMARY.

General constitution of the working circle.—The working Circle includes all the sandal areas in the hill villages in the North Coimbatore plateau and in Mettupalayam Range and in the plains villages in the vicinity of forests in all the four ranges	**176**
Area.—The approximate area of the working circle is 95,024.04 acres.	**177**
Felling Series.—The working circle is divided into 14 of felling Series	**178**
Statement of village sandal felling series.—A statement showing the name of the felling series, limits of the felling series, total number of survey fields, total area of survey fields, total area of survey fields in acres, number of fields containing sandal, area of fields containing Sandal in acres and total number of sandal trees is given	**179**

	Paragraph number
Analysis and valuation of crop.—A complete enumeration of trees over 6 inches in girth has been carried out	180
Results of enumeration.—The results of enumeration of trees over 6 inches is given in a statement. The total growing stock now consists of 1,36,807 trees over 6 inches girth	181
Objects of management.—The objects of management are outlined.	182
Analysis of sandal ownership.—The position in regard to the ownership of sandal in unreserves and in patta lands is analyed.	183–194
Identification of Government trees in pre 1928 pattas.—The identification of Government trees is based on an annual girth increment of 0.5 inch. In those pre 1907 agreement cases, where the date of assignment is not known, the date of agreement is taken as the date of assignment. In cases of assignment before the settlement (B.R.S. cases) where the year of assginment is not known, it is taken to be year 1907.	185
The future policy of the department in villages.—The future policy of the department in villages is outlined briefly	187
Payment of compensation.—The complaints received in regard to the payment of compensation are dealt with. The nature of the difficulties is explained and a solution to these is suggested.	188–190
Disposal of Government trees in pre 1928 pattas.—It is prescribed that the Government trees in the pre 1928 pattas will be numbered serially for each coupe in each series, along with the enumeration of dead trees in that coupe during the first felling cycle. Detailed sketches for each coupe on 16 inches=1 mile showing the location of trees in pre 1928 pattas will be maintained	191–192
Running record of sandalwood trees.—It is prescribed that a correct record of trees over post 1928 pattas and unreserves should be maintained	193
Other simplifications.—It is prescribed that a copy of the enumeration list should be furnished to the Tahsildar to enable the village officers to bring the list of trees in each field up-to-date	195–197
Felling cycle.—A felling cycle of 3 years is prescribed for all the felling series except (1) Mettupalayam village series, (2) Bhavani plains series and (3) Satyamangalam plains series. In these three series, the entire series will be exploited annually and there is no need to form coupes	198
Regulation of working.—The working shall be regulated by area ...	199
Calculation of the possibility.—The approximate annual yield expected is 60 tons	200
Acquisition of private sandal.—It is recommended that in the first felling cycle under this plan, agreements will be got executed by all owners of pre 1928 pattas in the hill villages of Satyamangalam and Talamalai Ranges	201
The details of the agreement are given.	
Payment for patta sandal and procedure for payment.—The two kinds of payments for patta sandal, the rate in force and the procedure for payment for patta sandal are explained in detail	202–203

Paragraph number

Publicity for the new procedure.—A vigorous drive to bring home to the hill villagers their precisely defined rights and how sandal trees are valuable source of wealth to them is necessary for the exclusion of private merchants 204

Method of executing the fellings.—The following rules will be strictly observed (1) In all classes of unreserves and patta fields only dead trees will be extracted. Extraction will be strictly confined to the coupe of the year. (2) The unit of enumeration and extraction should be a survey field. In case of subdivisions of a field owned by different pattadars, the subdivision shall be the unit of working. Blocks of unreserves, consisting of several survey numbers will be dealt with as one unit. (3) The particulars of enumeration of each patta field or subdivision will be shown separately when necessary, but the numbering of trees in a coupe shall be done serially. The survey stones should be properly maintained 205–207

Tabular statement of felling.—A statement showing the sequence of coupes to be worked is given 208

Subsidiary silvicultural regulations.—The Range Officer and staff of Talamalai and Satyamangalam Ranges should render all possible assistance to the ryots including the supply of seeds, if necessary. The technique of sandal propagation will be taught to the ryots who are willing to do such work 209

CHAPTER IV—FUEL WORKING CIRCLE.

Summary.

Constitution of the working circle.—The fuel working circle includes almost all trees under fuel working now. It also includes one new area on the plateau near Talavadi and some plains forests transferred from panchayat management in 1951. The area of the working circle is 42,118.50 acres 210

Felling series.—The working circle is divided into twenty-two felling series 211–213

Fuel coupes constituted in the ex-panchayat forests and new series formed ... ...

Character of vegetation is southern tropical thorn forests ... ...

Silvicultural system.—The silvicultural system adopted will be simple coppice system with reservation of trees of certain species 214

Rotation.—The coppice rotation is fixed at 30 years 215

Regulation of working.—The yield will be regulated by area. Each series is divided into 30 coupes and one coupe in each series will be offered for sale every year 216

Agency of exploitation.—The fuel coupes of Jaccanari and Odanthorai series should be normally worked by the co-operative societies to prevent large scale pilferage of fuel from all over the forest. When this is not possible these coupes may be offered for sale in auction. All the other coupes to be sold in public auction. Kumbaragundi series will be treated as a reserve fuel series and worked only when there is local demand. Condition for sale 217–219

	Paragraph number
Period of lease.—The period of lease is regulated from 6 months to 1 year depending upon the size of the coupe	220
The annual coupe.—The details of the annual coupes are furnished in a statement	221
Survey and demarcation.—Coupes will be surveyed and demarcated by cleared lines 6 feet wide with 1½ feet high white washed rough stone Cairns at suitable intervals. The surveyed sketch and list of reserved trees to be submitted to District Forest Officer in December annually. There shall not be less than 2 strips not more than 4 strips in a coupe a strip being ordinarily of 20 to 25 acres	222
Coupe arrears.—The unfelled area in an arrear coupe should be surveyed and reserved species re-enumerated after the end of the lease period and sold in auction with a suitable voidah. If the unfelled area contains very poor growth the area need not be sold	223
Felling rules.—The felling in a strip should be completed satisfactorily before commencing felling in the next strip. Reserve trees and trees of any species as occur in the beds or on the banks of streams should not be felled. Rules for marking trees which are excluded from felling. Implements to be used for felling, removal of timber after hammer marking by the Range Officer. Billetting and stacking of fuel before removal in cart load. Bamboos, avaram bark and other Minor Forest Produce occurring in the coupe shall remain the property of the Government	224
Statement of felling.—A tabular statement showing the coupe number, year of felling and the area in acres is given	225
Demarcation of worked coupes.—The corners of a worked coupe should be demarcated by planting stone slabs	226
Grazing regulation.—The fuel coupes in the Bennarai East Fuel Series in Satyamangalam Range will be open for grazing during the first 10 years including the year of felling and will be closed for the next 20 years. In all the other series, the existing prescription of closing the coupes only for first 5 years including the years of felling, will remain in force. Closed coupes should be clearly distinguished by fixing prominent notice board painted reid	227–228
Fire protection.—No special fire protection measures are suggested for the fuel working circle	230
Supply of agricultural implements.—The contractor will be required to supply agricultural implements and small timber to ryots at rates prescribed by District Forest Officer	231
Record of statistics.—The contractor should supply monthly accounts of removals of firewood and timber	232

CHAPTER V—SHANAR POLLARD WORKING CIRCLE.

Summary.

General constitution.—The object of the formation of the working circle is to meet the large seasonal demand for branch wood fuel from the shanars engaged in the palmyrah jaggery industry in Mathur, Marapalayam, Tirupur and other adjoining villages	233

	Paragraph number
Extent and division into felling series.—The total area of the working circle is 3,345 acres. Necessity for increasing the area. Felling series and their areas. Areas included in the additional area of 865 and the method of regeneration	234–236
Character of the vegetation.—The forest is an open stunted scrub and consists chiefly of fuel species. Species constituting the forest are given	237
Method of treatment.—The system of working will be lopping (with the preservation of the leading shoot or shoots of the tree in tact) where the trees are not fit for lopping the simple coppice system will apply.	238
The felling cycle.—The felling cycle is raised to twelve years. Coupes of approximately equal extent are laid out in each of the 2 series ...	239
Regulation of felling—One coupe in each series will be worked every calendar year. Instead of the present system, the coupe may be leased out to he local jaggery marketing co-operative societies. The lease period will be for six months, first January to 30th June ...	240
Lying out of coupe.—The coupe will be demarcated by six feet wide cut lines by the preceeding November	241
Tabular statement of fellings.—A statement showing the allotment of coupes to successive year is given	242
Subsidiary silvicultural operations.—The area available for artificial regeneration is about 865 acres	243–244
Mode of Regeneration.—The mode of regeneration will by kumri method. Fifty acres will be allotted every year on a 3 year lease. The aim is to abtain a series of 10 kumri plantations	245
Species—The species to be raised in the kumri will be palmyrah. Reasons for prescribing palmyrah are given. The espacement and other species to be raised are also given	246
Demarcation of felled coupes.—Stone slabs showing the number of the coupe worked and the year of felling and the number of the adjoining coupe will be planted at the corners of the coupe after completion of felling	247
Control of grazing.— The worked coupe and regeneration areas will be closed to grazing for a period of five years after felling and planting respectively	248

CHAPTER VI—BAMBOO WORKING CIRCLE.

Constitution of the Working Circle.—The working circle consists of all bamboo bearing areas of the division which can be worked at a profit. The total area of the working circle is 1,93,618 acres	249
Felling series.—Distinction into village section and commercial section omitted. Addition of Burliar and Aduthorai series from Coonoor Range. The number of felling series in the circle is 19. A statement showing the name of the felling series and its boundary is given ...	250–251
Method of treatment—The system of management is incapable of being described by any of the known silvicultural systems. The regulation of work will be by area	252

	Paragraph number
Felling cycle.—The felling cycle fixed is 3 years. Natural features are adopted in fixing the boundaries of the coupe	253
Agency of felling.—The agency of felling will invariably be contractors	254
Period of contract.—The official year will be the period of contract ...	255
Sale unit—Each coupe will be a sale unit. The practice of clubbing several coupes in a range will be avoided as far as possible	256
Felling rules—Five felling rules are given :— ... ... 1. A minimum of six mature culms shall be left in each clump. A culm will be considered mature if it is atleast one year old ... ... 2. No culms which is less than a year old will be felled. 3. No culms shall be removed with the rhizome. 4. Culms should be cut clean and as low as possible between the first and the second nodes from the ground. 5. Felling shall be made as far as possible on the side of the clump, opposite to that from which the largest number of culms occur.	257
Enforcement of rules—The necessity for the strict enforcement of the felling rules is given	258
Tabular statement of fellings—The area and boundaries of each of the coupes in all the series are given in the statement. The sequence of felling shall be maintained in all cases.	259
Grazing—No restriction of grazing is proposed except such closure prescribed under other chapters	260
Fire protection—No special measures of fire protection are feasible for this working circle	261
Record of statistics—The submission of monthly accounts of removals by the contractor and a statement showing the current prices of various classes of bamboos is prescribed	262

CHAPTER VII—SMALL TIMBER WORKING CIRCLE.

Summary.

Constitution of the working circle—The object of formation of the working circle is explained. The main object is to meet the small timber requirements of the plateau villages in Satyamangalam and Talamalai Ranges. The working circle is confined to North Coimbatore plateau	263
Constitution of the working circle—The working circle consists of the forest areas within easy access of the hill enclosures	264
Area—The total area of the working circle is 58,128 acres. The working circle is divided into 21 felling series. The description of the felling series is given	265
Character of the vegetation—The type of forest included in this working circle is dry deciduous.	267
Method of treatment—The ryot will be given the options to select the tree. The method of treatment will be selection coppice of the marked trees and the regrowth will be depended on for regeneration ...	268

	Paragraph number
Exploitable size—Only trees 15 inches girth or above at breast height, shall be marked for felling	269
Choice of species—With the exception of Sandal, Terminalia chefula, Dalbergia latifolia, Pterocarpus marsupium and Tamarind, any species may be marked for felling	270
Felling cycle—No felling cycle is prescribed. An area should not be worked oftener than once in ten years	271
Marking the trees—The selection and marking of the trees shall be carried out with the assistance of the local ryots. The trees shall be numbered serially for each coupe. The selection and enumeration of trees shall be done in November–December and January ... A minimum of 10 per cent of number of trees should be checked by the Range Officer.	272
Lay out of coupes—The coupes should be so arranged that all of them will be equidistant from the villages to be served. The first coupe may be laid out by District Forest Officer but the successive coupes should be contiguous. Coupes to be divided into four or more equi-productive strips	273
Regulation of working—Coupes will be open for felling from 1st of February to the 31st March. Felling should be confined to the coupe	274
Permits—Each permit will cover the felling and removal of one tree only and will be valid for a day	275
Agency for the issue of permits.—The agency will be a ryot or a group of ryots. If this agency is not feasible permits may be issued by a Forester	276
Value of permits—The value of the permit is to be fixed by the District Forest Officer with reference to the girth and species	277
Notification of coupes—Before opening the coupes, wide publicity will be given in the villages	278
Tabular statement of felling—Since the extent and location of the coupes depend upon the demand, no tabular statement of felling is given ...	279
Subsidiary silvicultural operation—No operations are prescribed ...	280
Grazing—No restriction of grazing is proposed	281
Control—Refer chapter XIII	282

CHAPTER VIII—GRAZING WORKING CIRCLE.

Summary.

General constitution and extent—This working circle includes all the reserved forests of this division with the exception of certain areas which are, or which may be closed to grazing	283
Area prescribed for closure—Area which will be closed to grazing is given	284
Closure of fuel working circle—A new experiment in closure will be tried in the Bennari East fuel series. In this series the closure will be made only during the latter twenty years of the rotation	285

Paragraph number

Regulation of grazing—Grazing will be regulated by permits at rates sanctioned by Government 286

Issue of grazing permits and penning licence—The permits will be issued by the departmental agency. The rates are as follows— ... 287

Sheep—Re. 0-2-0.
Cow and bull—Re. 0-4-0.
Buffalo—Re. 0-8-0.

Grazing year.—The grazing year is from 1st of July to the 30th June following 288

Grazing unit—The entire division will form the grazing unit 289

Penning.—Penning may be permitted free for licensed cattle in the authorized pens. Penning licenses may be issued for individual pens 290

Pen hygiene—Pen hygiene principles are prescribed 291

Closure of burnt area.—The District Forest Officer emppowered to close pens for reasons of fire in the vicinity of the pen or for any other reasons 292

Fodder grass—The right to remove hill grass will be sold in auction annually. Removal of grass in head load is permitted for bona fide domestic use from areas other than experimental plantations and kumri areas 293

Pasture improvement.—The result of research on pasture improvement conducted in the division is given 294

Introducion of grass in kumris is explained.

Demarcation of closed areas.—All areas closed to grazing shall be marked off on the ground by means of red sign boards placed at as many points as necessary 295

Grazing notification—The grazing notification which is to be drawn up with reference to the working plan prescriptions will be published annually in the District Gazette 296

CHAPTER IX—MINOR FOREST PRODUCE WORKING CIRCLE.

Summary.

General constitution of the working circle—The working circle cover the whole division including the former panchayat forests. The minor forest produce of unreserves in or adjoining the reserves will be exploited along with those of the reserves. Tamarind trees in unreserves will however continue to be managed by the Revenue Department 297

Method of treatment—The contract systems will continue for the present. If multi-purpose co-operative societies are formed the minor forest produce in the hills (except ivory) will be collected by the co-operative society 298

Deer and Sambhur horns are honey and wax will be collected by the department pending the formation of the co-operative societies. Elephants' tusks will always be collected departmentally.

Departures from the general system of leases can be freely madewith the prior sanction of the Conservator of Forests whenever they seem necessary or expedient 299

Paragraph number

A list of the different items of Minor Forest Produce units to be leased out in the different ranges of this division are given 300–303

For gallnuts, the lease period will be for 9 months from the first of August to the 30th of April following. Lease of tamarind will be annual for each range as an unit and the lease period will be for 6 months from the first of January to 30th of June. Cassia fistula bark will be treated as one unit and the ranges will be worked in rotation. The rotation is given. 304

Points to be noted in respect of Minor Forest Produce leases.—(1) Sholagars may be allowed to collect the M.F.P. in the settlements for their own use but not for sale, (2) the right to collect and remove fodder grass should not interfere with the free removal of grass in head loads by the public on bona fide domestic use, (3) Avaram bark fodder grass, lemon grass and stone and tree moss will be sold separately. All other items of produce will be sold either jointly or separately or in convenient groups at the discretion of the District Forest Officer in each range unit, (4) the items of Minor Forest Produce to be removed under each lease should be specifically named in the agreement 305

Distilliation of essential oil.—A brief history of the distillation of flex oil from fragrant grasses done departmentally from 1942–43 to 1950 is given 306

Experiment proposed.—A simple experiment in uprootal of grass for distillation in conjunction with wattle planting as suggested by the Chief Conservator of Forests is proposed 307–308

The experiment to be carried out is explained in detail. The object of the experiment is to enable the department to plant up the grassy slopes with wattle and at the same time make the economics of lemon grass distillation sounder as the cost of the uprootal of grass will be credited to the regeneration of wattle.

Subsidiary measures of improvement.

Cashewnut plantations.—It is proposed in the chapter on the rehabilitation working circle to raise cashewnut kumries on a large scale ... 309

Gallnuts.—A method to be devised to develop the advance growth of gallnut saplings. An experiment to tend and fire protect the natural regeneration of gallnuts as also of the timber species occurring in the locality is proposed in the chapter on "Miscellaneous Regulations" 310

Tamarind saplings in Chennimalai and Vallikaradu Reserved Forests.—It is prescribed that 50 tamarind plants will be raised annually in the fuel coupe of the previous years. Each plant will have a Balasamodendren live fence. The first coupe is being felled during 1956–57 and the planting will be done from 1957–58 onwards 311

Palmyrah in shanar and other kumries.—It is prescribed that palmyrah be raised by sowings in kumries in all localities wherever a demand exists in the neighbourhood for the species 312

CHAPTER X—TEAK POLE WORKING CIRCLE.

Summary.

	Paragraph number.
General constitution of the working circle.—An area of about 46 acres in Hulical drug reserved forest consisting of teak plantations formed since 1932 is constituted into the Teak Pole Working Circle	313
Division into blocks and compartments.—Particulars such as the year of formation and extent in acres of the existing teak plantations are given in a tabular statement. The entire area of 46.21 acres is divided into 20 units of more or less equal extent for annual clear felling and planting. The boundaries of the proposed blocks are indicated in the Management Map	314
Analysis and valuation of the crop.—A statement showing the current average height and girth measurements of dominant trees in each plantation as well as the quality class assessment of the older plantations is given	315–316
Reasons for revision of irrigation given	317–318
Method of treatment.—It is proposed to work these plantations on a short rotation for the production of poles considering the increase in casualties during the recent years	319
Silvicultural system.—The Silvicultural system to be adopted will be simple coppice, supplemented by artificial regeneration	320
Choice of species.—The main crop will be teak with an understorey of *swietenia macrophylla*	321
Rotation.—The rotation is fixed at 20 years	322
Method of executing fellings.—The area has been divided into 20 coupes and one coupe will be clear-felled annually and regenerated by the following year. All the operations will be carried uot departmentally. Detailed instructions regarding the time and mode of clear felling given	323–324
Coppicing, disposal of brush wood, etc., are dealt with	325–326
Tabular statement of felling.—A statement showing the coupe No., plantation year, area and year of felling is given	327
Regeneration operations.—No burning is permitted in the filled areas as regeneration is partly by coppice	328
Aligning and staking.—The espacement will be 8½ feet by 8½ feet. This will be completed by the middle of April	329
Mode of irrigation.—Results of plantations raised from 1932 briefly stated	330
Irrigation channels.—Laying out of channels, described	331
Planting.—Planting of teak stumps will be taken up and completed before the middle of April. Stumps may be procured locally in the same range. About 1.500 stumps will be ample for the requirement inclusive of any casuality replacement	332
There will be 603 stakes per acre at 8½ feet by 8½ feet. Teak stump to be introduced only where no vigorous coppice from the felled poles occurs within 2 feet of the stake. Selected stumps of the optimum size to be used and planting to be done in crow bar holes	333

Paragraph number.

Irrigation regime described.—Watering to be done in the manner prescribed till the 6th monsoon after planting when it may be stopped ... 334

Irrigation to be done again at the ages of 8, 11, 14 and 17 in order to prevent dying of trees due to drought 335

Tending.—Active, stools putting forth coppice shoots to be cleaned in the year following clearfelling leaving one stem per stool. The planted seedlings to be weeded twice or thrice during the first two years. Soil working to be carried out with such weeding 336

Thinning.—Ordinary 'D' grade thinning to be done at the ages 7 and 13 years. **Number of stumps to be retained after ecah thinning furnished.** Actual stumps should be checked after each thinning and recorded in the plantation journal 337

Tabular statement of thinnings given 338

Climber cutting must be attended to all the time and the entire plantation kept constantly free of climbers. Besides this, along with every marking for thinning climber cutting to be carried out thoroughly 339

Other regulations.—No objection is expected to the limited use of water **for teak planting alone** 340

Demarcation.—The limits of the coupes will be marked in the field with stone slabs at all corners to serve as permanent demarcation 341

Grazing.—The whole area will be closed to grazing 342

CHAPTER XI—REHABILITATION WORKING CIRCLE.

Summary.

General constitution of the working circle.—A fifteen year scheme is set forth for the rehabilitation of the class III Reserved Forests of the division transferred to departmental control from the management of forest panchayats in 1951 with the exception of Odanthorai Reserved Forest and Modur Pethikuttai Reserved Forest in Mettupalayam Range and Chennimalai and Vellikaradu Reserved Forest in Bhavani Range. The total area included in this working circle is 18,921.40 acres. 343

Position with regard to maps.—The position with regard to the availability of maps for these Reserved Forest is explained. 344–345

Method of treatment.—The treatments proposed are based on the stock mapping of the forests carried out by a Range Officer. The territorial staff is at liberty to choose the treatment according to practical **convenience.** 346

Technique No. I.

Coppice regeneration series.—Areas which contain an adequate number of active tree stumps, trees, saplings and established seedlings sufficient to re-cloth the forest if given protection are included in this series The total area included in this series is 4,760 acres. It has been formed into 3 series. Each series has been divided into 15 annual coupes. A statement showing the division of coupes by series and their area is given 347–348

Method of executing felling.—The method of executing the fellings and the rules to be followed are specified. The felling should be completed before the end of May. 349

Paragraph number.

Fencing.—It is prescribed that a live fence should be erected under the protection of a dead fence. The technique of raising the fence and the species to be raised are given. A programme is suggested for raising live fences in advance of working. **351–352**

Regeneration of small blanks.—The method of regenerating the blanks can be decided by the District Forest Officer. **353**

Grazing.—The coupe will be closed to grazing for 5 years from the year of felling. **354**

Cutting back of coppice regrowth, leasing the area for kumri cultivation, cutting down of noxious growth and strict protection measures are suggested. **355–358**

Estimate of cost.—A rough cost of the various items worked out per acre is given. The average cost per acre is Rs. 8–1–0. **359**

Technique No. II—Kumri regeneration series :

Constitution of the series.—These areas occur on the plains and contains mostly red loam with very little or no boulders and are suitable for raising tree species by kumri. The area will be tackled on a rotation of 30 years. The total area included under this series is 2,607 acres. 360

Division into annual blocks.—Each of the series has been divided into ten blocks, each to be tackled once in 3 years. A statement showing the sequence in which the area is to be tackled is given. 361

Method of treatment.—The blocks will be divided into a suitable number of small units not exceeding 5 acres and allotted to the kumridars. The kumridar will be permitted to raise any field crop he wishes to cultivate and Anacardium occidentale (cashew nut) will be the chief tree species for the " Kumri " areas. The espacement to be adopted will be 33 feet by 33 feet. **363**

Fencing.—A live fence, supplemented by dead fence will be raised by the kumridar.

Nursery practice.—The nursery technique for raising cashew seedlings is explained in detail. **364**

Period of lease.—The kumridar will be permitted to remain in the area up to 5 years. **365**

Other regulations.—The responsibilities and obligations of the kumridars are detailed. **366**

Grazing.—The annual blocks will be closed to grazing for a period of 5 years. **367**

Costs.—A rough estimate of cost worked out per acre is given. The average cost per acre is 14–11–0. **368**

Technique III—Regeneration after tractor ploughing :

Constitution of series and basis of selection.—This treatment will be applied to all areas in the plains where " kumri " cultivation, will not be possible but which contain a good admixture of rich loamy soil with loose boulders. The total area included under this series is 1,302 acres. **369**

Division into annual blocks.—The Velamundy series has been divided into 15 blocks and the Kongampalayam series of 17 acres will be tackled in the first year itself. A statement showing the division of areas into annual coupes is given. **370**

Paragraph number.

Method of treatement.—The method to be adopted and the species to be raised are given. 371

Fencing.—Fencing will be put up in the manner prescribed for coppice regeneration coupes 372

Raising cashew.—Wherever the areas are suitable cashew will be raised in preference to other species 373

Other regulation.—Weeding, soil working, tending, replacement of casualties and other works will be attended to by the staff employed for the purpose of regeneration. 374

Grazing.—The annual blocks will be closed to grazing for a period of five years. 375

Costs.—A rough estimate of costs per acre is given. The average cost per acre is 23-5-0. 376

Technique IV and V "Sunken mound" and "Trench and mound"—Regeneration series—

Basis of selection and constitution of series.—The sunken mound treatment is applied to areas in the plains and foot hill portions where tractor ploughing will not be possible and the trench and mound treatment to areas falling on hill slopes. The total area included under this series is 781 acres (562 plus 219 = 781 acres). 377

Division into annual blocks.—The series has been divided into 15 annual blocks. One block will be regenerated each year in the sequence given. 378

Method of treatment—(a) *Sunken mound.*—The regeneration technique by the sunken mound method is explained in detail with sketches. The species to be raised are Neem, Albizzia lebbeck, Dalbergia sissoo and Tamarind. 378

(b) *The trench and mound method.*—The technique of regeneration by the trench and mound method is explained in detail with sketch. 379

Fencing.—Fencing will be done in the manner prescribed for coppice regeneration coupes. 380

Nursery.—A nursery will be raised at the proper time to provide plants for replacing casualties. 381

Tending.—A tending consisting of the removal of growth interfering with the plants and climber cutting will be carried out in the second year. 382

Other regulations.—The staff employed for the regeneration work will attend to the soil working weeding, re-sowing and replacement of casualties. 383

Grazing.—The blocks will be closed to grazing for a period of 3 years from the start. 384

Estimate.—A rough estimate of cost per acre is as follows :— 385

1. Sunken mound series—Rs. 28-1-0.
2. Trench and mound series—Rs. 29-11-0.

Technique VI Hilltop and bouldery areas regeneration series :

Basis of selection and constitution of the series.—This treatment is applied to area where frequent out crops of rock occur and where the country is strewn with boulders, making it impossible to dig trenches at regular intervals. The total area included in this series is 841 acres. 386

	Paragraph number.
Division into annual blocks.—The series has been divided into 14 blocks to be regenerated at the rate of one block each year. The sequence is given.	387
Method of treatment.—The technique of regeneration is explained in detail.	388
Fencing.—Fencing will be done in the manner prescribed for coppice regeneration coupes.	389
Nursery.—A nursery will be raised to provide seedlings for replacement of casualties.	390
Tending.—A tending consisting of climber cutting and fencing the plants from oppressive plant growth will be done in the second year.	391
Other regulations.—The staff employed for the regeneration work will attend to weeding, soil working, and replacement of casualties.	392
Grazing.—The blocks will be closed for a period of 5 years from the commencement of work.	393
Estimate.—A rough estimate of costs per acre is given. The average cost per acre is Rs. 21–3–0.	394
General.—The scope for modification of the techniques and improvements to the techniques is discussed. The main object is to rehabilitate the area successfully and at cheap costs.	395

Chapter XII—Irrigated Plantation Working Circle.

Summary.

Constitution.—An area of 4,850 acres out of 5,811.42 acres of Odanthorai Reserved Forest is constituted as Irrigation Plantation Working Circle.	396
Water source.—The Hallur Halla is a perennial tributary of the Bhavani. The most take off point for a canal appears to be a spot locally known as Gudukkamadugu. The Public Works Department have reported about the feasibility of the project. Government orders have been received sanctioning the investigation and execution of the scheme.	397
Division into Block and compartments.—After the actual area commanded by the canal is ascertained division of blocks and compartments may be carried out.	398
Analysis and valuation of the crop.—Major portion falls under Southern thorn forests type and a small area close to the stream in its upper reaches comes under the southern tropical dry deciduous type.	399
Method of treatment—	
Sylvicultural system.—The system to be adopted will be clear felling and artificial regeneration.	400
Choice of species.—Only teak to be raised at an espacement of 8½ feet.	401
Rotation.—Rotation will be 20 years.	402
The annual coupe.—Taking the total area available as may be commanded by the canal, the annual area of the coupe will be 240 acres	403
Sequence of coupes.—The first coupe will be a complete block nearest the diversion.	404

Paragraph number.

Clearfelling.—The annual coupe will be clearfelled through the agency of contractors during the year preceding the regeneration. The lease period will be six months. The contractor to clear fell all growth and remove saleable produce except all growth 12 inches and below in girth which should be left at site for the burn. The Contractor should vacate the area by the end of February. 405

Regeneration operations—

Burning.—Area should be burnt not later than the end of March. Wherever possible a reburn should be carried out early in April. Precaution to be taken to prevent the spread of fire outside the area. 406

Formation of subsidiary channel system.—The available water to be utilised with the utmost economy. The system explained. 407

Alignment and staking.—Staking to be at 8½ feet x 8½ feet. Ig saucer bunding is decided, the saucers will be 4 feet square and have 1 foot cube pit at the centre. Adjoining saucers to have a common berm. In the pit th eash obtained from the regeneration area will be mixed up with the weathered soil and the filled up to form a mound 6 inches above the ground level 408

Planting.—To be taken up with the first good showers during June-July and completed quickly. If casualities occur before the canal water becomes available, it should be replaced. With the commencement of water supply no pit should be left out without a live stump. 409

Subsidiary soil in cultural regulations.

Tending.—Pits to be weeded twice or thrice as found necessary. Mammatty scraping should suffice. Surface of the saucer should be left undisturbed. 410

Thinnings.—To be done as prescribed in the chapter on Hulical teak plantations. 411

Glimber cutting.—To be done thoroughly along with every marking for thinning and wherever, necessary, oftener. 412

Other regulations—

Demarcation.— The limits of the coupes to be marked in the field with stone slabs at all corners. If feasible evergreen fire protection belts of species like Ocimum camphora to be raised by sowing all round the plantations. 413

Grazing.—The whole area to be closed to grazing. 414

CHAPTER XIII—MISCELLANEOUS REGULATIONS.

Summary.

***Fire** protection.*—Intentional fires are casused by grazers who burn the outer slopes annually and sometimes by shikaries. The power to close areas should be utilised. Plantations which are 3 years and less in age should be fire protected by the execution of the general fire protection operation. 416–417

***Fire** protection of sholas near Geddessal.*—Aiyanagiri Shola Wodekhan, Kanthavarai and Dodakun group of sholas should be fire protected by clearing two guide lines ten feet wide around the sholas and following the details given in this paragraph. 418

CHAPTER XIII—MISCELLANEOUS REGULATIONS SUMMARY—*cont.*

Paragraph number.

Maintenance of roads and traces.—All roads and bridle path will be kept in proper repair. The forest Engineer's trace, should be cleared and maintained. Transfer of Kempanaickenpalayam-Germalam road to the Highways Department. Road system to be constructed to facilitate bamboo extraction. The only road to be constructed is the Germalam-Sujjalkarai road and the construction of this road should be taken up early. 419–421

Buildings.—A programme of construction of new buildings is laid down. Suggestions are made for the construction of quarters for the staff stationed in the plateau and for the installation of sanitary fittings to rest houses and residential buildings. 422

Regeneration of former Germalam fuel series.—A method has been described to re-afforest annually an area of 5 acres by affording rigid fire protection to the area and allowing the natural regeneration and the young advance growth to establish and come up. The main object of this scheme is to stop the retrogression of the Germalam fuel series in which 1,064 acres were worked till 1952–63. 423–425

Kumri regeneration.—It has ben suggested that lands in the former panchayat forests may be leased out for kumri cultivation for 3 years as against one year to make it popular and to bring good demand. The species to be planted and the espacement to be adopted are also given. 426–427

Timber areas in the division.—The localities in which timber species occur, the agency of exploitation, number of trees to be worked each year in each locality and the marking rules are given. 428–429

Supply of brake poles to cartmen using Dhimbam ghat road.—The brake pole working circle has been abolished and provision is made for the supply of brake poles made of bamboo butts through the tea shop keeper at Dhimbam on a commission of one anna per brake pole. 430

Sandal sale depot at Satyamangalam.—The sandal sale depot at Satyamangalam will continue to be in charge of a separate Depot Ranger. 431

Rain guages.—Instructions are given to the correct maintenanc eof the rain guage stations, the measurement of rainfall and for the submission of monthly statements to the District Forest Officer. 432

Stores, tools and plant.—The routine expenditure on the purchase of, and repair to stores, tools and plant will be incurred. 433

Political boundary.—The boundary between Coimbatore District and Mysore State should be verified on a three year cycle. 434

Control records.—Detailed instructions are given for the maintenance of the following by the District Forest Officer :—

A. Control forms.

B. Register of deviations.

C. Control journal.

D. Control maps for

(1) Fuel Working Circle.

(2) Shanar Pollard Working Circle.

Paragraph number.

(3) Small Timber Working Circle.
(4) Teak Pole Working Circle.
(5) Rehabilitation Working Circle.
(6) Hallur Irrigated Teak Plantation Working Circle.
(7) Miscellaneous regulations such as (*a*) Fire maps, (*b*) Afforestation of grassy areas near Geddessal, (*c*) Exploitation of timber areas and (*d*) Kumri regeneration in class I Forests.

CHAPTER XIV—ESTABLISHMENT AND LABOUR.

Summary.

Establishment.—Increase in the activities of the division due to the rehabilitation of panchayat forests and the formation of Hallur Irrigated Teak Plantations. Necessity for a Ranger with the normal complement of Range staff for the Hallur Irrigated Plantations. The question of engaging additional staff should be taken up as soon os large scale regeneration operations are commenced in Velamundy Reserve Forest. 439

Ministerial establishment.—Suggestion is made for making the temporary posts in the District Forest Officer's office into permanent ones. 440

Mode of recruitment.—Suggestion is made for recruitment to the ranks of foresters, forest guards and watcher from literate persons belonging to hill tribes 441–442

Labour.—The forest settlements of sholagars and irulars are the main source of labour supply in the hills. Every reasonable endeavour must be made by the departmental officials of all ranks to ensure the welfare and prosperity of the settlements in active collaboration with all the available welfare organisations. 443

CHAPTER XV—FINANCIAL FORECAST AND COST OF THE WORKING PLAN.

Summary.

Forest.—The gross anticipated revenue during the period of this working plan is Rs. 1,17,39,925 of which the total expenditure is expected to be Rs. 26,18,175. The average annual surplus will be Rs. 6,08,117. 444–445

Cost of working plan.—The cost of the working plan is Rs. 52,714–6–9. 446

APPENDIX I.

A LIST OF THE MORE IMPORTANT STREAMS ON THE NORTH COIMBATORE PLATEAU.

Sathyamangalam Range.

Perennial.

The Swarnavathi
The Minchiguli Halla
The Sappai Halla
The Kanagiri Pallam

Semi-perennial.

The Chikkaizangiri Halla.
The Devar Halla (Tenavari Pallam).
Karmadai Halla (Minnatha Halla).
Kalkombai Halla.
Kumututa Halla.
Kilalathur Halla.
Jodumathi Halla.
Arekadavu Halla.
Chenikadavan Halla.
Tattee Halla.
Bellanathur Halla.
Pal Ar.

Talamalai Range.

Semi-perennial.

Sigathi Halla
Kuttamadagu Halla.
Ele Halla
Karibantrayan Halla
Odurkattai Halla (Muthimadavu Halla).
Kaikal Halla
Jogathi Halla
Halbidda Halla

Bhavani Range.

Semi-perennial.

Manzar Halla.
Varathur Pallam.
Kombai Halla.
Kallu Halla.
Aladakoppu Halla.

APPENDIX II.

Statement showing the average monthly rainfall recorded at each station in the Coimbatore North Division.

Name of the station.	*January.*	*February.*	*March.*	*April.*	*May.*	*June.*	*July.*	*August.*	*September.*	*October.*	*November.*	*December.*	*Total.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
						Sathyamangalam Range.								
1 Hassanur	0·28	0·58	1·11	2·93	4·53	2·28	2·03	3·71	3·75	6·10	4·16	1·63	33·09	Average for 35 years.
2 Gaddesal	0·50	0·38	1·02	3·36	4·64	2·85	3·44	4·75	5·53	6·58	4·80	2·27	40·12	Average for 40 years
3 Yekkathur	0·48	0·43	0·39	1·90	3·21	1·25	1·27	2·31	4·08	5·89	4·51	1·81	27·53	Average for 41 years.
4 Emmanur	0·47	0·51	0·77	2·80	2·86	1·37	1·08	2·09	3·33	7·16	5·08	1·49	29·01	Average for 9 years.
						Talamalai Range.								
5 Talamalai	0·60	0·46	0·83	3·66	4·48	2·09	1·71	2·68	4·27	7·43	5·29	1·59	35·09	Average for 40 years.
6 Jeerahalli	0·22	0·14	0·58	3·17	4·46	1·48	1·20	2·56	3·94	6·14	5·28	1·08	30·25	Average for 33 years.
7 Chikkahalli	0·07	0·78	0·46	2·39	4·00	0·82	1·52	3·06	4·27	6·24	4·79	1·89	30·29	Aveargae for 15 years.
						Bhavani Range.								
8 Mettur	0·39	0·68	0·58	2·24	3·31	1·72	2·81	3·98	3·95	7·41	3·32	1·42	31·82	Average for 22 years.
9 Athani	0·35	0·50	0·75	2·63	1·98	0·67	1·30	2·53	2·82	5·87	3·06	1·32	23·78	Average for 17 years.
						Mettupalayam Range.								
10 Tholampalayam	0·65	0·73	0·99	2·89	2·26	1·28	1·21	1·31	2·17	7·18	7·24	2·46	30·37	Average for 43 years.
11 Gopinari	1·38	0·78	1·16	2·51	2·04	1·98	2·47	1·30	2·36	6·69	7·08	1·72	31·47	Average for 43 years.

APPENDIX III.

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION—HASSANUR (SATHYAMANGALAM RANGE).

Year. (1)	*January.* (2)	*February.* (3)	*March.* (4)	*April.* (5)	*May.* (6)	*June.* (7)	*July.* (8)	*August.* (9)	*September.* (10)	*October.* (11)	*November.* (12)	*December.* (13)	*Total.* (14)
1931	0·40	..	..	..	4·60	2·00	2·00	2·10	8·30	4·50	9·60	5·90	39·40
1932	..	4·30	..	5·50	4·80	2·30	1·50	11·80	0·90	10·30	8·00	..	49·40
1933	..	..	..	..	4·00	8·30	2·40	9·00	4·30	11·80	0·90	2·60	43·30
1934	..	..	..	4·40	3·20	1·80	2·40	0·80	0·20	12·30	4·20	0·20	29·50
1935	0·10	..	..	8·70	2·00	2·80	1·80	4·10	1·00	5·60	1·90	0·50	28·50
1936	..	4·50	2·50	1·20	8·20	2·80	2·90	1·80	4·80	3·50	2·10	0·30	34·62
1937	..	3·82	4·85	2·85	5·14	3·72	2·21	3·15	4·58	7·23	6·15	1·12	44·87
1938	..	..	..	3·69	4·97	0·60	5·10	10·34	7·10	..	0·55	0·72	33·0
1939	..	..	1·99	4·60	1·85	2·03	0·29	3·52	2·17	15·36	4·91	..	36·72
1940	..	..	..	1·70	10·90	0·68	1·67	3·37	3·21	10·82	16·15	2·93	51·43
1941	0·36	0·46	..	2·75	4·38	2·43	0·70	3·23	6·00	6·03	3·54	4·65	34·53
1942	..	..	..	3·96	6·476	1·70	0·34	2·215	3·719	4·55	2·01	3·056	28·097
1943	1·70	0·40	..	2·925	7·30	0·35	2·25	1·725	2·28	10·335	2·475	..	31·740
1944	..	0·20	2·92	0·90	4·75	1·06	2·27	5·075	8·67	8·28	4·675	1·585	40·385
1945	..	..	..	7·51	4·41	0·20	1·47	4·475	1·12	4·45	..	..	23·635
1946	..	..	2·00	1·60	0·76	..	..	0·625	6·950	6·30	8·35	2·35	28·935
1947	..	..	1·75	1·88	0·825	0·675	4·50	1·835	6·530	10·030	..	2·50	30·525
1948	0·45	..	..	3·42	8·300	9·350	2·20	3·660	..	7·770	7·065	0·47	42·685
1949	..	..	..	..	6·150	2·680	..	0·600	1·400	6·180	3·290	..	20·300
1950	..	0·80	0·25	0·30	6·55	2·80	..	..	..	..	..	..	10·700
1951							(Figures not available.)						
1952	..	..	..	..	1·40	..	3·35	0·85	..	2·20	0·50	3·00	11·300
1953	..	..	..	4·65	2·15	3·40	4·15	4·70	2·09	9·73	4·00	..	34·87
Average ..	0·14	0·66	0·74	2·84	4·69	2·35	1·98	3·59	3·43	7·15	4·11	1·45	33·13

NOTE.—**The above average is only for 22 years instead** of (23) years as from (1931 to 1955) as the figures for 1951 is not available.

APPENDIX III—*cont.*

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION—GADDESAL (SATHYAMANGALAM RANGE).

Year. (1)	*January.* (2)	*February.* (3)	*March.* (4)	*April.* (5)	*May.* (6)	*June.* (7)	*July.* (8)	*August.* (9)	*September.* (10)	*October.* (11)	*November.* (12)	*December.* (13)	*Total.* (14)
1931	..	..	..	4·40	3·40	2·80	8·00	(No measurement.)		–	–	8·00	26·60
1932	..	1·60	0·30	5·60	6·40	..	2·30	7·20	3·70	7·80	7·90	1·20	44·50
1933	0·30	..	..	4·90	8·10	..	4·80	16·20	7·00	7·00	1·40	3·50	53·20
1934	3·80	..	1·30	5·20	6·60	2·00	5·70	0·30	6·50	5·50	6·20	1·10	44·20
1935	0·50	..	..	9·50	4·80	6·80	2·40	4·60	5·40	6·30	2·10	0·90	43·30
1936	..	0·80	3·80	1·20	6·80	7·20	6·40	0·50	1·90	5·00	3·20	0·90	37·70
1937	..	1·60	2·80	6·50	5·30	4·30	3·20	5·10	4·90	10·00	5·40	0·80	49·90
1938	0·80	..	0·30	4·90	2·40	2·60	0·70	10·40	2·80	1·20	0·80	1·60	28·50
1939	1·20	..	4·80	2·80	4·00	4·00	4·00	4·00	5·00	12·20	4·80	..	46·80
1940	..	..	1·40	7·20	5·40	6·00	3·20	3·20	6·40	9·78	12·70	3·30	58·58
1941	0·60	..	..	4·10	5·02	2·40	1·80	4·00	10·80	4·50	6·40	4·40	44·02
1942	..	..	..	3·00	3·30	2·70	0·40	3·50	1·80	3·60	1·60	3·40	23·30
1943	2·60	0·40	0·10	6·20	11·40	3·60	4·20	3·60	4·40	11·80	6·80	..	55·10
1944	0·60	0·80	3·60	1·90	6·60	5·30	1·80	4·80	7·40	10·80	6·80	7·30	57·70
1945	..	..	..	8·00	2·40	8·40	..	7·00	2·80	10·40	2·80	..	41·80
1946	..	..	4·00	1·60	4·80	1·60	..	5·60	5·60	11·20	14·00	6·00	54·40
1947	0·80	..	0·17	6·40	2·20	4·80	2·00	8·00	6·00	20·00	..	2·40	52·77
1948	..	..	..	2·40	4·40	1·60	0·40	4·40	..	..	..	..	13·20
1949	0·80	..	..	..	2·00	1·20	..	0·40	..	..	4·80	..	9·20
1950	..	0·80	..	..	1·20		(No measurement.)						
1951							(Figures not available.)						
1952	..	..	..	..	3·00	1·20	4·00	2·00	..	4·20	..	5·20	19·60
1953	..	..	..	7·40	2·90	2·70	3·70	4·30	6·20	11·70	3·40	..	42·30
Average ..	0·55	0·27	1·03	4·24	4·66	3·39	2·81	4·96	4·43	7·65	4·56	2·38	40·93

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION—YEKKATHUR (SATHYAMANGALAM RANGE).

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1931	..	..	0·25	1·90	5·50	1·00	1·20	0·35	6·20	3·60	9·90	4·70	34·60
1932	..	..	..	4·00	5·70	..	2·50	6·85	0·80	13·40	2·60	0·40	36·2^{5}
1933	..	..	1·10	3·60	4·30	0·50	2·60	12·40	5·40	9·70	1·50	1·80	42·90
1934	41·0	0·50	0·30	0·40	6·10	0·60	1·00	..	..	5·10	4·30	..	22·40
1935	..	..	..	2·40	1·40	2·80	3·70	1·05	1·50	6·50	1·60	0·75	21·70
1936	0·20	3·00	1·90	1·50	..	0·60	1·10	..	4·98	3·60	2·80	0·60	20·28
1937	..	0·75	0·73	8·80	3·85	0·20	..	0·40	4·25	3·45	5·90	..	28·33
1938	..	..	0·25	3·90	..	..	3·80	1·90	5·95	..	0·80	..	16·60
1939	..	..	1·80	3·55	1·60	3·00	..	1·34	6·00	15·5	2·95	..	35·74
1940	..	..	0·08	3·50	8·18	2·00	0·04	0·75	3·50	5·47	25·48	3·00	52·00
1941	..	..	..	3·08	5·54	0·08	0·58	1·54	11·84	8·52	4·72	1 ·25	37·15
1942	..	..	..	3·915	4·041	0·416	0·49	4·16	2·46	2·10	0·54	2·27	20·39
1943	1·37	0·354	..		(Rain measuring glass broken—not recorded).							..	1·72
1944	..	0·79	3·458	..	3·87	3·08	..	2·30	5·80	7·84	14·06	12·90	54·09
1945	..	..	..	2·00	..	..	..	2·81	2·14	12·378	2·17	..	21·498
1946	..	..	1·75	2·12	6·33	0·50	0·25	1·10	3·73	4·98	6·01	2·16	28·93
1947	..	0·16	0·44	3·34	1·04	0·45	..	5·39	2·00	5·64	..	..	18·46
1948	..	..	0·79	0·37	..	..	..	..	..	..	..	..	1·16
1949	..	..	..	..	..	..	..	..	0·20	..	..	..	0·20
1950	..	..	..	..	..	..	..	..	..	..	..	..	1·33
1951							(Figures not available.)						
1952	..	..	..	..	4.73	..	..	3·08	6·56	12·10	1·51	1·63	29·61
1953	..	0·91	..	5·56	2·24	1·25	2·41	17·71	4·13	5·39	2·26	..	25·86
Average ..	0·26	0·29	0·61	2·57	3·13	0·78	0·94	2·24	3·68	5·97	4·24	1·50	26·21

APPENDIX III—*cont.*

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION—TALAMALAI (TALAMALAI RANGE).

Year. (1)	*January.* (2)	*February.* (3)	*March.* (4)	*April.* (5)	*May.* (6)	*June.* (7)	*July.* (8)	*August.* (9)	*September.* (10)	*October.* (11)	*November.* (12)	*December.* (13)	*Total.* (14)
1931	..	..	0·70	0·80	2·40	0·60	0·20	2·00	3·80	8·80	9·20	..	28·50
1932	..	0·40	..	4·40	7·20	2·40	1·60	11·40	1·00	15·60	8·10	0·50	52·60
1933	..	..	0·80	4·60	12·20	1·20	2·00	10·00	0·40	14·40	4·30	0·80	59·70
1934	2·00	..	0·20	1·20	13·30	2·80	1·10	0·44	..	18·20	2·00	0·26	41·50
1935	0·12	..	1·24	10·80	2·72	1·20	0·80	6·00	0·60	2·20	1·00	1·00	27·68
1936	..	0·10	2·80	0·60	4·00	..	0·80	1·20	5·60	4·80	4·00	0·90	24·80
1937	..	0·80	2·00	5·40	6·80	..	..	2·40	3·20	6·40	7·20	0·80	35·00
1938	..	..	0·80	6·80	0·80	..	4·00	4·40	7·20	0·40	..	..	24·40
1939	0·80	..	..	1·20	5·80	2·40	..	0·40	3·20	6·00	12·00	..	31·80
1940	..	..	1·80	8·40	4·80	3·20	2·00	3·20	12·00	0·16	15·40	4·10	55·06
1941	..	..	..	1·24	7·10	1·20	0·20	2·40	6·20	5·60	..	..	23·94
1942	..	..	..	4·10	7·80	3·40	1·60	6·20	0·90	7·10	4·80	6·00	41·90
1943	5·60	1·10	..	4·00	..	..	..	..	8·80	13·90	3·10	..	36·50
1944	2·20	0·80	3·20	2·40	5·00	3·00	..	2·10	5·00	6·00	10·40	0·70	40·80
1945	..	..	..	2·40	7·00	2·60	1·20	6·20	1·90	11·10	3·30	..	34·70
1946	0·90	..	1·40	4·90	1·10	..	..	1·90	11·60	6·60	3·70	4·20	36·30
1947	..	..	..	13·00	6·10	2·20	..	6·40	14·80	11·40	..	..	53·90
1948	..	..	..	0·80	8·70	..	4·60	2·80	..	7·00	5·20	..	29·10
1949	..	..	..	8·40	..	..	..	..	..	9·20	10·20	8·00	35·80
1950	..	0·40	0·40	0·50	2·40	..	..	..	..	..	..	..	3·70
1951	(Not available.)												
1952	(Not available.)												
1953	(Not available.)												
Average	0·58	0·18	0·77	4·30	5·26	1·31	0·96	3·47	4·76	7·74	5·20	1·36	35·89

NOTE.—Average for (20) years from 1931 to 1950 is only taken.

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION—CHIKKALLI (TALAMALAI RANGE.)

Year. (1)	*January.* (2)	*February* (3)	*March.* (4)	*April.* (5)	*May.* (6)	*June.* (7)	*July.* (8)	*August.* (9)	*September.* (10)	*October.* (11)	*November.* (12)	*December.* (13)	*Total.* (14)
1937	..	..	2·10	6·60	5·90	..	2·80	..	2·00	11·40	4·60	0·40	35·80
1938	..	..	..	1·20	1·20	..	6·80	15·20	10·16	1·00	..	..	36·00
1939	..	..	..	1·00	3·80	0·80	..	1·60	2·00	13·80	7·80	..	30·80
1940	..	..	2·00	2·40	11·00	2·50	2·60	1·40	5·00	3·30	14·70	1·80	46·70
1941	..	10·02	..	4·20	7·60	2·60	1·00	2·80	4·60	7·20	4·50	3·80	48·32
1942	..	..	..	0·80	5·00	2·60	..	2·50	3·90	4·20	2·00	0·20	21·20
1943	1·00	..	0·60	1·90	8·10	..	2·80	..	3·30	7·50	0·70	..	25·90
1944	..	0·50	0·60	0·20	3·40	2·40	..	5·80	14·10	11·70	12·60	3·20	54·50
1945	..	..	..	5·10	2·90	0·56	3·10	4·10	1·40	7·70	1·80	..	26·66
1946	..	..	1·20	1·00	2·30	0·40	..	5·80	7·70	8·00	13·20	11·30	50·90
1947	..	..	0·20	1·50	3·70	..	1·10	3·90	1·10	3·60	..	0·60	15·70
1948	..	..	..	3·60	2·70	..	..	..	0·40	..	..	..	6·70
1949	..	..	..	4·50	1·80	..	..	..	..	8·20	10·00	7·10	31·60
1950	..	1·20	0·20	0·90	0·60	0·40	..	..	..	..	..	..	3·30
1951	..	..	..	..	..	..	2·60	2·80	8·00	6·00	..	..	20·40
Average ..	0·07	0·78	0·46	2·39	4·00	0·82	1·52	3·06	4·27	6·24	4·79	1·89	30·29

APPENDIX III—*cont.*

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION—JEERAGAHALLY (TALAMALAI RANGE).

Year.	*January.*	*February.*	*March.*	*April.*	*May.*	*June.*	*July.*	*August.*	*September.*	*October.*	*November.*	*December.*	*Total.*
1931	..	..	..	1·20	5·00	2·00	2·40	2·20	2·40	4·80	..	..	20·00
1932	..	..	..	4·60	6·40	1·20	1·20	10·40	1·20	9·20	8·10	..	42·30
1933	..	..	1·60	2·30	7·40	0·60	2·00	6·80	4·40	1·40	..	..	26·5
1934	1·60	..	..	5·70	8·00	0·80	0·80	..	0·80	12·40	2·80	..	32·90
1935	..	..	0·40	2·60	2·80	1·80	1·90	2·60	..	6·60	..	0·40	19·10
1936	..	..	2·20	3·30	5·60	..	0·40	0·80	4·00	2·00	2·20	0·20	20·70
1937	..	..	1·40	2·40	4·80	4·00	0·60	..	3·60	8·00	5·30	..	30·10
1938	..	..	0·20	2·40	2·80	..	5·20	6·40	6·00	0·48	..	0·80	23·88
1939	0·40	..	..	2·00	0·80	0·60	..	2·20	6·00	10·80	6·40	0·40	30·40
1940	..	..	0·80	2·80	4·80	4·00	0·80	2·60	10·00	6·20	14·00	2·00	48·00
1941	..	..	..	2·40	5·60	1·60	..	3·00	4·60	9·80	3·80	3·40	34·20
1942	..	..	..	3·20	7·20	3·80	1·00	2·10	3·70	3·00	5·20	1·60	30·80
1943	1·60	..	..	3·90	6·00	..	4·10	2·80	5·30	11·40	6·20	0·60	41·90
1944	..	..	3·60	0·80	3·60	1·70	..	3·60	8·00	4·40	12·70	3·90	42·30
1945	..	..	..	4·40	6·90	0·40	2·10	2·50	1·10	11·70	5·40	..	34·50
1946	0·20	..	0·50	2·00	2·20	..	..	0·40	4·10	6·80	10·60	6·20	33·50
1947	..	..	1·80	8·40	1·00	2·30	4·20	5·01	5·80	5·00	..	..	33·51
1948	..	..	..	4·20	2·00	0·50	..	..	..	..	..	..	6·70
1949	..	..	..	3·70	3·60	..	..	..	..	8·20	9·20	7·10	31·80
1950	(Figures not available).												
1951	..	..	..	1·45	..	..	..	2·50	3·24	2·63	4·85	..	14·67
1952	..	..	..	4·20	0·80	..	..	..	..	..	..	..	5·00
1953	(Figures not available).												
Average	0·18	..	0·60	3·27	4·16	1·20	1·27	2·66	3·54	5·94	4·61	1·27	28·70

NOTE.—Average is only for (21) years as the figures for 1950 and 1953 are not available.

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION, GOPINARI, METTUPALAYAM RANGE.

Year. (1)	*January.* (2)	*February.* (3)	*March.* (4)	*April.* (5)	*May.* (6)	*June.* (7)	*July.* (8)	*August.* (9)	*September.* (10)	*October.* (11)	*November.* (12)	*December.* (13)	*Total.* (14)
1935	0·80	1·20	..	8·20	1·00	..	0·80	1·20	..	8·40	4·00	2·80	25·40
1936	0·80	0·60	4·80	..	2·20	2·00	1·20	..	1·60	8·80	6·80	..	28·80
1937	0·40	1·40	6·00	3·80	2·10	1·60	1·80	1·40	0·60	11·60	5·40	0·60	36·70
1938	4·00	0·60	3·60	0·60	1·00	0·90	3·60	0·80	2·40	1·60	0·60	..	18·80
1939	0·50	..	5·60	5·60	0·40	1·20	2·00	2·40	2·20	6·30	6·20	..	26·80
1940	..	..	..	7·00	..	1·60	0·60	1·00	1·80	6·30	18·20	3·90	40·40
1941	0·90	..	..	2·80	5·40	4·80	0·80	2·50	2·20	6·40	10·80	2·20	38·80
1942	..	..	..	2·20	0·80	0·80	0·02	1·30	0·80	6·86	1·13	8·20	22·11
1943	8·30	..	..	4·10	1·20	1·00	1·60	..	1·80	11·60	8·20	..	37·80
1944	1·30	0·70	1·80	1·60	3·60	0·40	0·70	1·60	8·50	7·80	17·80	4·10	49·90
1945	..	1·60	0·60	2·70	0·80	1·60	1·40	0·40	0·10	10·90	11·50	0·50	32·10
1946	0·40	..	2·30	6·40	0·30	4·60	0·60	3·40	1·60	6·20	7·40	4·80	38·00
1947	0·30	0·80	2·80	4·00	1·20	..	0·50	0·40	0·20	8·80	..	..	19·00
1948	6·80	0·30	..	3·60	2·00	4·00	1·00	(No measurement).					17·70
949	..	..	..	3·20	3·20	..	4·80	1·20	..	2·20	0·60	..	15·20
1950	..	2·90	1·40	(Bottle broken—no measurement.)					1·30	5·80	3·40	..	14·80
1951	4·30	0·40	0·20	5·00	4·30	1·20	0·20	3·80	6·10	5·50	9·70	..	40·70
1952	..	4·20	1·40	2·60	2·00	..	..	..	4·80	4·00	..	4·40	23·40
1953	..	..	..	..	2·40	6·00	2·00	0·80	0·80	..	0·80	..	12·80
Average	1·52	0·77	1·31	3·52	1·88	1·76	1·31	1·31	2·04	6·61	6·25	1·75	30·03

APPENDIX III—*cont.*

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION, EMMANUR, METTUPALAYAM RANGE.

Year.	*January.*	*February.*	*March.*	*April.*	*May.*	*June.*	*July.*	*August.*	*September.*	*October.*	*November.*	*December.*	*Total.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1935	0·40	..	..	3·70	3·00	3·20	0·20	2·20	1·70	7·40	1·20	2·10	25·10
1936	..	2·90	2·30	0·40	2·80	2·40	1·50	1·80	4·39	6·63	5·38	0·35	30·85
1937	..	2·56	2·41	4·54	3·08	0·76	1·06	1·11	4·00	7·86	8·04	..	35·12
1938	..	..	0·38	6·30	2·13	..	3·44	5·52	5·51	0·56	0·71	1·25	25·80
1939	1·21	..	1·40	3·08	2·46	2·93	0·05	2·12	4·42	12·04	5·05	0·05	34·81
1940	..	..	0·13	4·45	7·45	4·02	1·55	1·77	2·48	4·40	16·29	4·40	46·94
1941	0·20	1·04	..	2·34	2·92	1·20	0·79	1·81	6·53	7·39	5·82	1·07	31·11
1942	..	..	..	2·48	3·19	0·58	0·12	1·84	3·74	3·41	2·22	5·29	22·87
1943	3·63	1·06	0·16	3·02	2·77	0·60	0·31	0·99	1·81	10·83	6·02	0·33	31·43
1944	0·25	0·16	3·86	0·45	1·31	2·20	0·11	1·67	7·47	12·45	13·58	2·50	46·01
1945	0·07	..	..	2·72	2·13	1·75	2·47	5·55	0·73	7·27	6·20	0·05	28·94
1946	0·42	..	1·67	1·79	1·39	..	..	0·50	4·92	6·31	8·11	4·46	29·57
1947	1·57	0·15	0·69	3·74	4·38	0·94	0·88	2·32	1·87	7·75	0·07	1·40	25·76
1948	0·43	..	..	2·97	2·40	0·09	0·49	3·54	0·54	8·23	5·55	1·29	25·53
1949	..	..	..	3·31	2·95	3·17	2·49	0·62	1·86	5·55	0·98	..	20·93
1950	..	0·44	0·50	0·29	2·49	0·12	0·75	2·72	1·50	5·04	4·33	..	18·18
1951	0·37	..	..	3·73	3·16	..	1·59	2·41	2·59	3·92	4·72	0·10	22·59
1952	0·04	0·64	0·68	0·73	2·17	..	1·38	0·27	2·64	4·11	0·26	3·46	16·38
1953	0·36	0·65	0·48	3·21	2·20	2·15	1·38	0·94	4·55	14·98	2·02	0·24	33·16
Average	0·47	0·51	0·77	2·80	2·86	1·37	1·08	2·09	3·33	7·16	5·08	1·49	29·01

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION, METTUPALAYAM.

Year.	*January.*	*February.*	*March.*	*April.*	*May.*	*June.*	*July.*	*August.*	*September.*	*October.*	*November.*	*December.*	*Total.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1943	6·08	0·53	0·49	3·80	1·33	..	1·21	0·84	0·64	13·80	8·82	0·08	37·62
1944	1·57	0·77	4·34	0·20	2·41	0·99	1·54	1·24	2·34	7·22	15·75	1·57	39·94
1945	..	0·26	..	7·05	3·73	0·25	1·08	1·96	..	11·84	7·41	..	33·58
1946	..	..	1·53	2·05	0·40	0·45	0·39	2·97	6·13	8·19	13·19	3·78	39·08
1947	1·83	2·59	1·89	4·04	2·67	0·30	1·73	1·72	2·00	6·47	3·45	0·47	29·16
1948	2·35	0·68	3·06	0·95	5·56	0·41	0·38	1·94	0·09	7·72	8·95	3·13	35·33
1949	..	..	..	3·34	3·54	1·47	2·38	1·47	0·56	2·41	4·93	0·62	20·72
1950	..	2·84	0·30	0·80	0·82	1·28	0·28	4·10	1·04	2·62	9·00	..	23·08
1951	0·48	0·57	0·18	5·23	5·88	0·37	0·29	2·58	2·87	1·75	10·45	3·08	33·71
1952	0·16	3·80	0·15	1·56	0·39	0·14	0·98	0·85	1·59	3·45	1·44	10·63	25·14
1953	0·47	2·23	..	6·88	2·55	1·04	1·71	0·62	1·91	8·51	1·59	1·22	28·73

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION, THOLAMAPALAYAM, METTUPALAYAM.

Year.	*January.*	*February.*	*March.*	*April.*	*May.*	*June.*	*July.*	*August.*	*September.*	*October.*	*November.*	*December.*	*Total.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1935	..	..	..	6·80	2·00	..	..	4·20	..	9·20	7·10	4·00	33·30
1936	..	2·40	4·00	2·40	3·20	..	..	..	3·60	11·80	7·60	..	35·00
1937	..	..	..	..	..	..	..	3·10	1·00	10·60	7·60	1·20	23·50
1938	..	3·70	0·80	3·60	0·80	..	3·20	3·20	1·80	0·40	..	2·00	19·50
1939	0·80	..	..	2·60	3·60	..	..	1·00	1·30	9·11	5·50	0·60	24·51
1940	..	..	..	5·60	6·50	..	..	1·00	3·50	3·90	16·10	3·00	39·60
1941	2·00	..	..	5·80	5·00	3·25	..	1·25	2·00	7·25	11·00	2·00	39·55
1942	..	..	..	0·70	1·90	..	0·60	1·10	1·90	5·13	3·00	5·06	19·39
1943	0·13	0·20	..	1·40	2·50	0·60	..	0·40	1·20	14·70	5·60	..	26·73
1944	0·60	0·40	0·40	0·60	1·20	..	..	1·00	6·00	10·00	13·30	2·80	37·80
1945	..	1·20	0·80	2·60	..	3·70	1·40	0·50	..	12·80	13·30	0·30	36·60
1946	0·60	..	3·20	6·80	1·80	0·40	0·50	0·50	2·80	11·20	8·10	7·20	43·10
1947	0·60	1·00	3·00	7·40	2·40	..	0·40	1·40	0·90	6·70	3·40	0·20	27·40
1948	2·40	0·60	0·60	2·50	1·20	..	..	2·60	..	..	..	..	9·80
1949	..	..	..	3·00	6·20	..	3·00	1·40	0·80	6·40	3·70	..	24·50
1950	..	1·40	0·20	1·00	1·70	..	..	1·90	1·80	3·10	6·90	..	18·00
1951	1·00	..	0·90	4·50	3·30	1·30	..	4·80	6·70	4·80	9·10	..	36·40
1952	..	2·20	0·70	2·90	0·60	..	0·60	..	2·80	3·50	..	6·00	19·30
1953	..	2·60	0·70	6·20	1·30	..	..	..	0·80	4·80	..	..	16·40
Average	0·43	0·83	0·86	3·49	2·38	0·49	0·51	1·54	2·05	7·13	6·41	1·81	27·93

APPENDIX III—*cont.*

STATEMENT OF RAINFALL IN COIMBATORE NORTH DIVISION, ATHANI, ANTHIYUR RANGE.

Year.	*January.*	*February.*	*March.*	*April.*	*May.*	*June.*	*July.*	*August.*	*September.*	*October.*	*November.*	*December.*	*Total.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1937	..	0·26	..	..	1·35	2·56	0·40	4·12	5·71	9·79	2·27	0·02	26·48
1938	..	0·55	0·09	0·77	0·65	0·15	0·91	4·18	1·18	..	..	..	11·98
1939	..	..	0·50	9·19	3·00	1·35	..	3·26	3·66	5·20	2·82	..	28·48
1940	..	..	1·38	2·29	5·30	..	0·12	..	2·00	7·20	10·25	1·40	29·94
1941	..	..	..	0·16	0·05	..	..	0·05	3·06	1·06	..	..	4·33
1942	..	..	..	1·30	5·20	0·55	0·16	1·57	5·15	2·00	2·40	..	18·33
1943	2·45	0·30	..	1·70	1·82	0·61	0·55	0·90	2·35	4·98	2·79	..	18·45
1944	0·55	0·80	3·55	..	..	..	..	0·74	5·48	16·37	10·12	0·50	38·11
1945	..	..	2·40	5·05	1·89	..	..	1·47	1·27	7·36	4·15	..	23·59
1946	..	..	..	6·02	..	..	1·02	0·80	1·34	3·70	6·65	1·91	21·44
1947	2·97	..	0·70	2·60	0·49	0·79	0·90	4·67	0·22	7·72	..	..	21·06
1948	..	..	0·97	1·40	2·03	..	0·10	6·38	..	3·75	4·74	1·30	20·67
1949	..	2·22	..	4·25	4·42	0·27	3·06	4·16	0·33	12·56	0·87	..	32·14
1950	..	2·20	..	..	..	0·55	3·78	2·60	4·80	6·50	0·90	..	21·33
1951	..	..	3·00	6·65	1·50	..	1·15	0·69	7·31	..	2·25	9·65	32·20
1952	..	1·10	..	0·50	3·60	..	9·10	2·20	0·60	..	1·50	7·60	26·20
1953	..	1·00	0·10	2·80	2·40	4·55	0·80	4·70	4·55	8·10	0·35	..	27·35
Average ..	0·35	0·50	0·75	2·63	1·98	0·67	1·30	2·53	2·82	5·87	3·06	1·32	23·78

Statement of Rainfall in Coimbatore North Division, Mettur Bargur Range.

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1932	..	3·03	..	3·13	7·82	1·07	0·25	8·76	1·14	10·94	4·77	1·24	42·15
1933	..	..	0·15	0·89	4·25	1·76	2·17	5·34	5·97	12·23	0·80	2·48	36·04
1934	1·73	..	..	1·81	2·45	1·44	0·92	1·55	0·81	11·78	3·13	0·03	25·65
1935	0·50	..	..	2·50	0·59	1·40	1·30	5·64	2·20	5·65	4·65	1·07	25·50
1936	..	2·99	1·39	1·03	3·36	2·33	4·14	1·73	6·86	1·37	2·62	1·70	29·52
1937	..	0·46	0·34	2·37	3·14	1·68	2·56	6·24	3·92	5·04	2·21	1·08	29·04
1938	..	..	0·40	1·57	5·33	1·19	5·64	7·36	4·42	1·14	0·05	1·74	28·84
1939	0·24	..	0·46	5·14	1·22	3·63	0·18	2·12	5·31	15·61	4·85	..	38·76
1940	..	..	1·51	3·14	10·57	1·59	1·38	2·90	6·87	6·49	9·98	0·09	44·52
1941	1·04	..	0·05	1·00	4·48	1·64	0·69	1·64	6·46	3·15	6·41	3·10	28·66
1942	..	..	..	4·67	3·35	2·07	0·98	5·09	..	6·84	1·47	2·10	26·57
1943	2·75	0·84	0·40	3·61	..	1·22	1·37	1·91	3·38	12·15	2·55	..	30·18
1944	0·05	1·77	1·51	0·79	2·48	4·14	1·65	4·23	5·39	8·01	5·08	1·44	36·55
1945	..	..	..	2·80	1·17	0·38	4·31	4·45	3·10	6·13	3·64	0·31	26·29
1946	0·55	..	0·64	1·31	1·29	0·80	2·04	2·63	3·41	9·37	11·63	5·07	38·74
1947	0·39	..	0·80	0·83	0·47	0·87	4·94	2·04	8·21	11·15	0·70	0·10	30·50
1948	1·25	..	1·96	1·86	7·07	0·87	2·11	2·95	..	3·77	5·60	0·22	27·66
1949	..	0·70	..	3·72	1·98	2·29	5·84	3·50	5·73	8·05	0·37	..	32·18
1950	..	3·99	..	0·40	1·38	0·93	4·23	8·45	1·81	8·77	..	..	29·96
1951	..	..	3·00	2·90	4·52	0·30	1·42	3·99	3·57	5·54	..	6·34	31·58
1952	..	0·57	0·10	1·10	2·94	0·45	7·92	2·55	4·09	..	1·96	3·20	24·88
1953	..	0·50	..	2·68	2·98	5·68	5·72	2·52	4·32	9·81	1·87	..	36·08
Average ..	0·39	0·68	0·58	2·24	3·31	1·72	2·81	3·98	3·95	7·41	3·33	1·42	31·82

APPENDIX IV.

STATEMENT SHOWING THE NATURE AND QUALITY OF WATER-SUPPLY OF DEPARTMENTAL BUILDINGS IN THE COIMBATORE NORTH DIVISION.

Station.	*Description of buildings.*	*Source of water supply.*	*Conditions.*
Satyamangalam Range.			
1 Hassanur	Rest house, subordinates' rest house and subordinates' line.	Stream and well.	Within a furlong of the rest house not used. Water taken from the Binakanahall is tream or the village well. The stream is closely but often there is no running water and pits have to be dug in the stream bed.
2 Gednasal	Rest house, subordinates' rest house (Old Deputy Rangers quarters) and subline.	Stream ..	Well near the rest house. Dry. No water available. Underground water from perennial Aryangiri shola stream, near the subline is used. Distance over one mile to two miles according to the weather.
3 Kottadi	Rest house	Do. ..	Water from the stream two furlongs away from the rest house.
4 Yekkathur	Rest house and Subordinates' line ..	Well ..	Water from the step well near the Jodumathihalla situated in the village munsif's land in Basavanapuram. Poor quality of water. Distance nearly four furlongs surroundings unhygenic.
5 Kadambur	Rest house and subline	Do. ..	The well near the subline is liable to dry up in very hot summer ; water good. Alternative source stream from Urugamalai, three furlongs from the rest house.
6 Germalam	Subline only	Do. ..	Well within a furlong and not used. The subline not occupied. Water-supply from the Private wells close to the stream.
7 Makkampalayam ..	Rest house and subordinates line ..	Stream ..	Water from the stream close to the rest house. Distance nearly three furlongs and sometimes from pits dug in the river bed. Water good ; well about two furlongs to the north of the rest house not used.
8 Kongarpalayam ..	Rest house only	Well ..	Water from the village well. Distance six furlongs.
9 Satyamangalam ..	Range Officers' quarters .. .. and Deputy Rangers' quarters.	Do. ..	Wells in both.
Talamalai Range.			
10 Chekkahalli	Rest house and subordinates line ..	Do. ..	Draw well in patta and Six furlongs away from the rest house and subordinates' line. Rest house best water in the range.
11 Jeeragahalli	Rest house and Forester's quarters ..	Do. ..	Well in the rest house compound.
12 Talamalai	Old inspection shed	Do. ..	Village well (Seerganhalli) about six furlongs away.
13 Dimbam	Old tank shed used as store house for brake poles by contractors.	Tank ..	Water from the tank near the Hassanur-Chamrajnagar road. Unsatisfactory.
14 Onnaithittu	Rest house and subordinates' line generally unoccupied.	Stream ..	Water from the Bejjalhatti stream about a mile away ; during rains. There is running water at other times water is not good. There is a well also but unused.
15 Bennari	Subordinates' line	Well ..	Water from the well near Mariamman temple motor fitted.
16 Kothanmangalam ..	Old tanah shed used as inspection shed and subordinates' line.	Do. ..	Village well closely good water.
Bhavani Range.			
17 Chollampalayam ..	Rest house	Well ..	Well in rest house compound ; not used ; water taken from the village well ; close to the rest house.
18 Athani	Do.	Do. ..	Well in the compound, good water.
19 Anthiyur	Ranger's and Range clerk's quarters and office.	Do. ..	Well in the compound, good water.
20 Chennampatti or Viralikattur.	Murali beat subordinates' quarters ..	Do. ..	Well in the compound ; good water.
21 Pathramaduvu (Palamalai plateau).	Subordinates' quarters generally unoccupied.	Stream ..	Stream close by.
Mettupalayam Range.			
22 Koravankandi ..	One roomed inspection shed close to the Bhavani river.	Bhavani River (Perennial).	
23 Neerali	One roomed inspection shed at the extremity of a ridge over hanging the Bhavani.	Bhavani River.	Water has to be carried up in pots about a furlong.
24 Gopanari	A small rest house without house stable and subline.	Stream ..	The only source of water-supply Kodugarapallam which flows just in front of the bungalow and contains good water for about six or seven months in the year. For the rest of the year pit have to be dug with stream bed.
25 Kunjapanai	Rest house subordinates' line dismantled.	Well ..	Well dug by Revenue Department in 1951, good water.

APPENDIX V.

LIST OF WELLS AND TANKS IN GRAZING GROUNDS IN THE NORTH COIMBATORE DIVISION.

Satyamangalam Range—

1 Kurumban Kuttai.
2 Mollekarai tank.
3 Bellari Well.
4 Karurdachi Kuttai.
5 Otaikurai tank.
6 Madeswaran Kuttai.
7 Amaigudi Well.
8 Kuravai tank.
9 Atakurai tank.
10 Wilson tank.
11 Kakkarai tank.
12 Basuvembetta tank.
13 Godukerai tank.
14 Guthilathur tank.
15 Elsikurai tank.
16 Imbicombai tank.
17 Ullegoanden tank.

Talamalai Range.

18 Halikerai tank.
19 Ibbimadavu tank.
20 Alamalaigudi tank.
21 Jalimadan Madeswaran Koil Kuttai.
22 Todamalai Madappa.
23 Well in Doddacombai Halla.
24 Jeerahallai Kurai tank.
25 Tekkarai Kurai tank.
26 Marapara Kurai tank.
27 Yerrakuttai tank.
28 Aathigudikarai tank.
29 Tippankurai tank.
30 Mogarakurai tank.
31 Lokolakurai tank.
32 Gudikurai tank.
33 Chathrakurai tank.
34 Karadiguddi tank.
35 Bommankuttai tank.
36 Tippankuttai tank.

Bhavani Range.

37 Kakkayanoor well.
38 Kinathadi well.
39 Kilari Kinar.
40 Ammani Kuttai.
41 Ethikuttai tank.
42 Errakuttai.
43 Senkuttai tank.
44 Baradikurai kuttai.
45 Madeswaran Koil Kuttai.
46 Well at Ethyrakaradu.

Mettupalayam Range.

47 Ansen spring.
48 Kenizur tank.

APPENDIX VI.

41-A STATEMENT SHOWING PARTICULARS OF THE RESERVES CONTAINED IN EACH RANGE IS GIVEN BELOW—LIST OF RESERVED FOREST IN COIMBATORE NORTH DIVISION.

Name of Reserved Forest. (1)	*Area in acres.* (2)	*Board's Proceedings communicating section 16 notification.* (3)	*Notification number and date.* (4)	*Page in* Fort St. George Gazette. (5)	*Whether finally demarcated or not.* (6)	*Class.* (7)	*Provincial remunerative or unremunerative.* (8)	*Remarks.* (9)
			Satyamangalam Range.					
Barabettah	3,628·80	No. 33, dated 26th February 1904.	No. 26, dated 8th January 1904.	Pages 29 and 30, dated 12th January 1904.	Yes.	I	Provincial remunerative.	..
Guthiyalathur	194,568·07	No. 430, dated 18th September 1896.	No. 389, dated 4th August 1896.	Pages 987 and 988, dated 11th July 1896.	Yes.	I	Do.	..
Guthiyalathur enclosure ..		No. 341, dated 2nd February 1914.	No. 90, dated 2nd February 1914.	Page 259, dated 24th February 1914.	Yes.	I	..	..
Guthiyalathur		No. 508, dated 5th December 1918.	No. 123, dated 2nd December 1918.	Page 1219, dated 3rd December 1918.	..	..	..	..
Guthiyalathur revised		....	No. 228, dated 25th May 1920.	Pages 913 to 921, dated 13th July 1920.	..	..	..	..
Do.		....	No. 230, dated 25th May 1920.	Page 921, dated 13th July 1920.	..	..	..	..
Do.		....	No. 167, dated 2nd June 1922.	Pages 565 to 615, dated June 1922.	..	..	..	..
Do.		....	No. 430, dated 30th November 1932 and No. 823, dated 18th November 1941.	Page 1891, dated 6th December 1932 and Page 1379, dated 25th November 1941.	..	..	..	..
Do.		....	No. 689, dated 21st August 1952.	Page 1302, dated 3rd September 1952.	..	..	..	..
Do.		....	**No. 308, dated 28th May 1956.**	**Page 830 of Part I, dated 20th June 1956.**	..	..	..	..

APPENDIX VI—*cont.*

41-A STATEMENT SHOWING PARTICULARS OF THE RESERVES CONTAINED IN EACH RANGE IS GIVEN BELOW—LIST OF RESERVED FOREST IN COIMBATORE NORTH DIVISION—*cont.*

Name of Reserved Forest. (1)	*Area in acres.* (2)	*Board's Proceedings communicating section 16 notification.* (3)	*Notification number and date.* (4)	*Page in Fort St. George Gazette.* (5)	*Whether finally demarcated or not.* (6)	*Class.* (7)	*Provincial remunerative or unremunerative.* (8)	*Remarks.* (9)
			Satyamangalam Range—cont.					
Guthiyalathur extension ..	401·25		No. 135, dated 14th March 1956.	Page 292, dated 19th March 1895.	..	..	..	..
Do.		....	No. 293, dated 1st August 1937.	Page 1318, dated 2nd August 1932.	Yes.	I	..	..
Do.		....	No. 690, dated 21st August 1952.	Page 1303, dated 3rd September 1952.	..	..	..	..
Ullepalayam	2,617·60	No. 33, dated 20th February 1904.	No. 26, dated 8th January 1904.	Page 28, dated 12th January 1904.	Yes.	..	Provincial remunerative.	..
			Talamalai Range.					
Akkurjorai	**948·00**	No. 140, dated 25th February 1904.	No. 166, dated 8th April 1902.	Pages 393 and 394, dated 15th April 1902.	Yes.	I	Provincial remunerative.	..
Akkurjorai extension	385·00	....	No. 728, dated 5th September 1938.	Page 1323, dated 13th September 1938.	Yes.	I	Do.	..
Talamalai	1,31,144·81	No. 479, dated 19th November 1891.	No. 435, dated 5th October 1891.	Pages 992—997, dated 6th October 1891.	..	..	..	..
Talamalai amended		No. 24, dated 31st January 1912.	No. 110, dated 14th March 1913.	Pages 292-293, dated 18th March 1913.		..	..	..
Talamalai		No. 24, dated 31st January 1912.	No. 112, dated 14th March 1913.	Page 293, dated 18th March 1913.	Not fully demarcated.	I	Provincial remunerative.	..
Talamalai addition		....	No. 72, dated 27th January 1914.	Page 210, dated 17th February 1914.	..	..	..	..
Talamalai revised		....	No. 1024, dated 13th October 1949.	Page 1923, dated 1st November 1949.	..	..	..	..
Revised Talamalai R.F. ..		....	No. 517, dated 27th May 1953.	Page 853, dated 10th June 1953.	..	..	..	..
Talamalai Extension	3,065·65	No. 512, dated 7th August 1894.	No. 350, dated 10th July 1894.	Pages 860 and 861, dated 17th July 1894.	..	..	..	..
Talamalai amended		....	No. 360, dated 11th July 1911.	Page 723, dated 25th July 1911.	No fully demarcated.	I	Provincial remunerative.	..
Talamalai revised		....	No. 75, dated 12th January 1954.	Page 154, dated 10th February 1954.	..	..	..	..
Velamundy	10,697·20	No. 2007, F, dated 8th July 1885.	No. 174, dated 20th June 1885.	Pages 453 to 455, dated 7th July 1885.	..	..	..	
Velamundy revised		No. 451, dated 14th October 1897.	No. 473, dated 23rd September 1897.	Pages 1240–1243, dated 12th October 1897.	..	..	..	
Velamundy Extension		No. 15, dated 13th January 1903.	No. 466, dated 20th December 1902.	Page 1301, dated 23rd December 1902.	..	..	..	
Velamundy revised		No. 152, dated 17th January 1912.	No. 52, dated 17th January 1912.	Page 135, dated 30th January 1912.	Not fully demarcated.	III	Taken over from Panchaya board in 1951.	
Velamundy addition		No. 20, dated 1st December 1913.	No. 48, dated 10th January 1913.	Page 139, dated 4th February 1913.	..	..	..	
Velamundy amended		No. 93, dated 25th April 1913.	No. 171, dated 2nd April 1913.	Pages 419 and 420, dated 22nd April 1913.	..	..	..	
Velamundy revised		....	No. 431, dated 30th August 1915.	Page 940, dated 28th September 1915.	..	..	..	
Do.		....	No. 674, dated 13th July 1953.	Page 1047, dated 22nd July 1953.	..	..	..	
Do.		....	No. 207, dated 13th April 1953.	Page 582, dated 27th April 1955.	..	..	..	
			Andhiyur Range.					
Ennamangalam	5,610·7	No. 258, dated 8th November 1910.	No. 580, dated 6th August 1910.	Pages 1712 and 1713, dated 8th October 1910.	Yes.	I	Provincial remunerative.	
Ennamangalam revised ..		No. 587, dated 6th October 1910.	No. 75, dated 9th March 1923.	Page 291, dated 13th March 1923.	Yes.	..	..	
Do.		....	No. 316, dated 29th August 1934.	Page 1557, dated 4th September 1934.	Yes.	..	..	
Nagalore	559·65	No. 319, dated 7th December 1903.	No. 456, dated 19th November 1903.	Page 1236, dated 24th November 1903.	..	I	Provincial remunerative.	
		No.1113 Misc., dated 28th July 1911.						
Nagalore revised		....	No. 19, dated 3rd January 1934.	Page 79, dated 9th January 1934.	..	..	..	
South Bargur	61,481·73	No. 507, dated 3rd July 1893.	No. 318, dated 9th June 1893.	Pages 698 and 699, dated 20th June 1893.	Yes.	I	..	
South Bargur revised		No. 42, dated 6th March 1914.	No. 100, dated 4th February 1914.	Pages 303 and 304, dated 3rd March 1904.	..	..	..	
South Bargur addition ..		No. 176, dated 23rd September 1909.	No. 390, dated 6th September 1909.	Page 960, dated 21st September 1909.	..	..	..	
Do. ..		No. 200, dated 24th September 1914.	No. 524, dated 2nd September 1914.	Page 1325, dated 22nd September 1914.	..	..	..	
Do. ..		....	No. 325, dated 27th June 1918.	Page 1325 dated 2nd July 1918.	..	..	..	
Voipadi	**439·44**	....	No. 145, dated 18th March 1898.	Page 25, dated 22nd May 1898.	Yes.	III	..	

APPENDIX VI—*cont.*

41-A STATEMENT SHOWING PARTICULARS OF THE RESERVES CONTAINED IN EACH RANGE IS GIVEN BELOW—LIST OF RESERVED FOREST IN COIMBATORE NORTH DIVISION—*cont.*

Name of Reserved Forest. (1)	*Area in acres.* (2)	*Board's Proceedings communicating section 16 notification.* (3)	*Notification number and date.* (4)	*Page in Fort St. George Gazette.* (5)	*Whether finally demarcated or not.* (6)	*Class.* (7)	*Provincial remunerative or unremunerative.* (8)	*Remarks.* (9)
			Andhiyur Range—cont.					
Arachalur	1,083·74	....	No. 568, dated 26th November 1896.	Page 1484, dated 1st December 1896.	Yes.	III	..	..
Arachalur revised		....	No. 344, dated 25th June 1955.	Page 988, dated 6th July 1955.	Yes.	III	..	..
Chennimalai		....	No. 222, dated 8th May 1900.	Page 671, dated 15th May 1900.	..	..	..	..
Chennimalai addition ..		....	No. 634, dated 24th November 1910.	Page 1844, dated 6th December 1910.	..	..	..	..
Chennimalai revised		....	No. 517, dated 2nd January 1917.	Page 1376, dated 11th December 1917.	..	..	..	..
Chennimalai amended		....	No. 518, dated 21st November 1917.	Pages 1376 and 1377, dated 11th December 1917.	Yes.	III	..	..
Chennimalai revised	..	....	No. 231, dated 23rd August 1912.	Page 938, dated 28th August 1923.	..	..	..	..
Do.	..	....	No. 251, dated 9th May 1955.	Pages 753 and 754, dated 25th May 1955.	..	..	..	..
Villikaradu	278·43	....	No. 565, dated 26th November 1896.	Page 1464, dated 1st December 1896.	Yes.	III	..	..
Kongampalayam	242·96	....	No. 215, dated 18th May 1897.	Page 645, dated 25th May 1887.	Yes.	III	..	..
Kongampalayam revised.		....	No. 349, dated 6th December 1928.	Page 1896, dated 11th December 1928.				
Do.		....	No. 102, dated 12th April 1933.	Page 633, dated 25th April 1933.				
			Mettupalayam Range.					
Anaikatti North	630·00	No. 17, dated 27th January 1916.	No. 33, dated 24th December 1915.	Page 79, dated 18th January 1916.	Yes.	I	Provincial unremunerative.	..
Constantia	34·99	No. 281, dated 30th June 1891.	No. 206, dated 27th April 1891	Page 383, dated 5th May 1891.	Yes.	I	Do.	..

Name of Reserved Forest. (1)	*Area in acres.* (2)	*Board's Proceedings communicating section 16 notification.* (3)	*Notification number and date.* (4)	*Page in Fort St. George Gazette.* (5)	*Whether finally demarcated or not.* (6)	*Class.* (7)	*Provincial remunerative or unremunerative.* (8)	*Remarks.* (9)
Gopinari	24,323·30	No. 3104, dated 13th November 1885.	No. 309, dated 14th November 1885.	Page 747, dated 4th November 1885.	Yes.	I	Provincial unremunerative.	..
Gopinari amended		No. 127, dated 12th June 1913.	No. 243, dated 21st May 1913.	Page 1012, dated 10th June 1913.	..	..	..	..
Gopinari addition		No. 165, dated 23rd November 1915.	No. 497, dated 8th November 1913.	Page 1081, dated 23rd November 1913.	..	..	..	..
Gopinari revised								
Hulical drug	2,643·96	No. 168, dated 3rd April 1886.	No. 117, dated 23rd March 1886.	Page 339, dated 7th April 1886.	Yes.	I	Provincia unremunerative.	..
Hulical drug amended		....	No. 4, dated 3rd January 1899.	Page 13, dated 3rd January 1899.	..	..	..	..
Jaccanari	6,413·12	No. 242, dated 20th May 1892.	No. 152, dated 12th April 1899.	Page 507, dated 24th March 1892.	Yes.	I	Provincial unremunerative.	..
Jaccanari addition		....	No. 143 dated 5th May 1924.	Page 563, dated 13th May 1924.	..	..	..	..
Kallar	973·23	No. 2783/F550, dated 3rd October 1885.	No. 276, dated 15th September 1885.	Page 640, dated 2nd October 1885.	Yes.	I	Provincial unremunerative.	..
Kallar amended		....	No. 184, dated 26th April 1899.	Page 472, dated 2nd May 1899.	..	..	..	..
Kallar addition 1		....	No. 193, dated 16th April 1891.	Page 282, dated 6th May 1891.	..	..	..	..
Kallar addition 2		....	No. 206, dated 27th April 1891.	Page 382, dated 5th May 1891.	..	..	..	..
Kandiyur	5,248·00	No. 3104/F620, dated 13th November 1885.	No. 309, dated 4th November 1885.	Page 748, dated 4th November 1885.	Yes.	I	Provincial remunerative.	
Kandiyur amended		No. 48, dated 4th March 1913.	No. 88, dated 11th February 1913.	Pages 259 and 260, dated 4th March 1913.	..	..	..	..
Melur slopes	3,743·97	No. 389, dated 2nd June 1893.	No. 235, dated 2nd May 1893.	Page 512, dated 9th May 1893.	Yes.	I	Provincial remunerative.	..
Melur addition	14·38							
Modur and Pethikuttai ..	..	No. 3104/F. 620, dated 13th November 1885.	No. 309, dated 4th November 1885.	Page 749, dated 4th November 1885.	Yes.	I	Do.	..
Modur and Pethikuttai extension.	5,147·57	No. 131, dated 23rd July 1912.	No. 323, dated 1st July 1912.	Page 709, dated 16th July 1912.	..	..	Do.	..
Modur and Pethikuttai amended.		No. 48, dated 4th March 1913.	No. 86, dated 11th February 1913.	Page 259, dated 4th March 1913.	..	..	Do.	..
Modur and Pethikuttai addition.		No. 27, dated 1st March 1915.	No. 95, dated 9th February 1915.	Page 215, dated 2nd March 1915.	..	..	Do.	..
Modur and Pethikuttai revised.								

APPENDIX VI—*cont.*

41-A—STATEMENT SHOWING PARTICULARS OF THE RESERVES CONTAINED IN EACH RANGE IS GIVEN BELOW—LIST OF RESERVED FORESTS IN COIMBATORE NORTH DIVISION—*cont.*

Name of Reserved Forest. (1)	*Area in acres.* (2)	*Board's Proceedings communicating section 16 notification.* (3)	*Notification number and date.* (4)	*Page in Fort St. George Gazette.* (5)	*Whether finally demarcated or not.* (6)	*Class.* (7)	*Provincial remunerative or unremunerative.* (8)	*Remarks.* (9)
			Mettupalayam Range—cont.					
Nellithorai and Sundapatti.	10,698·70	o. 3104/F62, dated 13th November 1895.	No. 309, dated 4th November 1885.	Page 748, dated 8th November 1885.	Yes.	I	Provincial unremunerative.	..
Nellithorai and Sundapatti, amended.		No. 28, dated 18th February 1914.	No. 75, dated 27th January 1914.	Page 211, dated 17th February 1914.	..	..	..	
		No. 35, dated 24th February 1914.	No. 89, dated 22nd Februray 1914.	Page 258, dated 24th February 1914.	..	..	..	
Nellithorai and Sundapatti addition 1.								
Nellithorai and Sundapatti addition 2.		No. 13, dated 19th January 1917.	No. 101, dated 15th February 1917.	Page 227, dated 20th February 1917.	..	..	..	
Nellimalai	1,312·1	No. 53, dated 5th February 1900.	No. 32, dated 20th January 1900.	Page 94, dated 23rd January 1900.	Yes.	III	Provincial unremunerative.	..
Nellimalai amended		No. 48, dated 4th March 1913.	No. 87, dated 11th February 1913.	Page 259, dated 4th March 1913.	..	..	..	..
Nellimalai revised		..	..	....	..	..	..	..
Nellimalai addition		..	No. 307, dated 27th February 1920.	Page 1257, dated 5th October 1920.	..	..	..	..
Nilgiri Eastern slopes	28,140·00	No. 648, F. 118, dated 20th March 1886.	No. 87, dated 5th March 1886.	Page 193, dated 16th March 1886.	Yes.	I	Provincial remunerative.	..
Do.		..	No. 328, dated 9th July 1900.	Page 1083, dated 17th July 1900.	..	..	..	..
Do.		..	No. 376, dated 26th October 1905.	Pages 799 and 800, dated 3rd October 1905.	..	..	..	..
Do.		..	No. 479, dated 26th October 1906.	Pages 1121 and 1122, dated 30th October 1906.	..	..	..	..
Odanthorai	5,811·42	No. 3101 F. 620, dated 13th November 1885.	No. 309, dated 4th November 1885.	Pages 747 and 748, dated 4th November 1885.	Yes.	III	..	..
Odanthorai amended		No. 6, 10th January 1913.	No. 9, dated 21st December 1912.	Pages 32, dated 7th January 1913.	..	..	..	..
Odanthorai revised.								
Pillur slopes	3,749·01	No. 157, dated 8th March 1894.	*No. 73, dated 15th February 1894.	Page 187, dated 20th February 1894.	Yes.	I	Provincial unremunerative.	..
Sandalwood R.F. No. 1 ..	14·20	No. 23, dated 18th January 1902.	No. 19, dated 26th December 1901.	Page 23, dated 7th January 1902.	Yes.	I	Provincial remunerative.	..
Sandalwood R.F. No. 2 ..	38·64	....	No. 288, dated 24th July 1926.	Pages 1808 and 1809.	Yes.	I	Do.	..
Thadagam	12,053·87	No. 485, dated 12th February 1885.	No. 40, dated 30th January 1885.	Pages 93 and 94, dated 10th February 1895.	Yes.	I	Provincial unremunerative.	..
Thadagam revised		No. 104, dated 20th May 1914.	No. 283, dated 30th April 1914.	Pages 802 and 803, dated 2nd June 1914.	..	..	..	..
Thadagam addition		....	No. 347, dated 14th July 1917.	Page 993, dated 7th August 1917.	..	..	..	..

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*Will be furnished after getting the particulars from the District Forest Officer, Coimbatore South.

APPENDIX VII.

LIST OF BEATS AND SECTION IN COIMBATORE NORTH DIVISION.

The names of the beats into which each Range is divided are shown in the following statement :—

Serial number and name of beats. (1)	*Area in acres.* (2)	*Section.* (3)	*Headquarters.* (4)	*Staff.* (5)
	Satyamangalam Range.			
1 Chickarasampalayam	11,228	Satyamangalam	Chickarasampalayam.	One Guard and Watcher.
2 Kondappanaickenpalayam	9,250	Do.	Satyamangalam	Do.
3 Dhimbam	16,207	Do.	Dhinam	Do.
4 Kempanaickenpalayam	8,250	Bungalowpudur	Kempanaickenpalayam.	Do.
5 Kongarpalayam	14,200	Do.	Bungalowpudur	Do.
6 Bungalowpudur	8,146	Do.	Do.	Do.
7 Kanakkampalayam	5,120	Do.	Kanakkampalayam.	Do.
8 Hassanur	11,200	Hassanur	Hassanur	Do.
9 Geddessal	11,400	Do.	Geddessal	Do.
10 Germalam	16,500	Germalam	Germalam	Do.
11 Kadatti	16,500	Do.	Kadatti	Do.
12 Yekkathur	13,500	Yekkathur	Yekkathur	Do.
13 Kottadai	8,890	Kottadai	Kottadai	Do.
14 Makkampalayam	20,250	Makkampalayam	Makkampalayam	Do.
15 Gundri	15,020	Do.	Gundri	Do.
16 Kakkarai	6,630	Kadambur	Kakkarai	Do.
17 Kadambur	8,800	Do.	Kadambur	Do.

Talamalai Range.

1 **Bennari**	9,572	Bennari	Bennari	One Guard and Watcher.
2 **Velamundy East**	4,833	Do.	Shanbagapudhur	Do.
3 **Velamundy West**	6,723	Do.	Perikallipatti	Do.
4 **Onnaithittu**	11,630	Onnaithittu	Onnaithittu	Do.
5 **Kothamangalam**	17,046	Do.	Kothamangalam	Do.
6 **Talamalai**	14,860	Talamalai	Talamali	Do.
7 **Peerkadavu**	3,749	Do.	Newpudur	Do.
8 **Naithalapuram**	12,400	Naithalapuram	Nassanur	Do.
9 Binakanahalli	14,600	Do.	Nassanur	Do.
10 Jeeragahalli	15,400	Jeeragahalli	Jeeragahalli	Do.
11 Belathur	15,947	Do.	Belathur	Do.
12 Chickalli	10,600	Chickalli	Chickalli	Do.
13 Tignari	10,000	Do.	Tignari	Do.

Bhavani Range.

1 Murali	12,668	Murali	Murali	One Guard and Watcher.
2 Chellampalayam	12,943	Do.	Chellamapalayam	Do.
3 Talakarai	10,000	Do.	Talakarai	Do.
4 Michaelpalayam	11,482	Andhiyur	Andhiyur	Do.
5 Kongadai	10,000	Do.	Koilnatham	Do.
6 Athani	10,559	Do.	Athani	Do.
7 Arachalur	10,83·74	Chennimalai	Arachalur	Do.
8 Voipadi	682·40	Do.	Voipadi	Do.
9 Chennimalai	1349·87	Do.	Chennimalai	Do.

APPENDIX VII—*cont.*

LIST OF BEATS AND SECTION IN COIMBATORE NORTH DIVISION—*cont.*

Serial number and name of Beats. (1)	*Area in acres.* (2)	*Section.* (3)	*Headquarters.* (4)	*Staff.* (5)
	Mettupalayam Range.			
1 Manar	7,524	Thekkampatti	Pillur	One Guard and Watcher.
2 Gopinari	12,956	Do.	Gopinari	Do.
3 Velliangad	12,000	Do.	Velliengad	Do.
4 Tholampalayam	6,000	Do.	Tholampalayam	Do.
5 Naickenpalayam	6,054	Do.	Naickenpalayam	Do.
6 Kandiyur	10,598	Do.	Thekkampatti	Do.
7 Sundapatti	5,329	Do.	Nellithorai	Do.
8 Patramangalam	14,070	Mettupalayam	Newpudur	Do.
9 Kuthamundi	14,070	Do.	Sirumugai	Do.
10 Pethikuttai	5,148	Do.	Pethikuttai	Do.
11 Odanthorai	7,124	Do.	Mettupalayam	Do.
12 Hulical	4,730	Do.	Mettupalayam	Do.
13 Jaccanari	6,511	Do.	Mettupalayam	Do.

APPENDIX VIII.

46. The following statement shows the admitted enclosures of cultivation in the **reserves** of the division.

Serial number and name of enclosure. (1)	*Area in acres.* (2)
Satyamangalam Range.	
1 Guthiyalathur	14,758·4
2 Kadahatti	4,864·0
3 Germalam	2,208·0
4 Arigiam	1,843·2
5 Gundri including Anaginatham	1,683·2
6 Hassanur	1,280·0
7 Anaikerai	876·8
8 Kurumbur	768·0
9 Kottadai	652·8
10 Malliamma Durgam	563·2
11 Mavahalla	268·8
12 Devarantham	230·4
13 Kakkarai	57·0
14 Makkampalayam	225·11

Serial number and name of enclosure. (1)	*Area in acres.* (2)
Talamalai Range,	
1 Talamalai	2,502·4
2 Higgalore	1,923·2
3 Naidalapuram	1,632·0
4 Mudiyanur	556·8
5 Putrai	284·2
6 Binakanahalli	100·5
7 Gali Dhimbam	96·0
8 Bejjalahatti	19·0
9 Kotturswami temple	12·8
10 Dhimbam Chatram	6·0
11 Bennari	*

* Area not known.

Bhavani Range.

Nil.

Mettupalayam Range.

1 Manar S.F. No. 6 of Nellithorai	13·65

APPENDIX IX.

STATEMENT OF YIELD AND PRICES OBTAINED FOR TIMBER IN THATTAVADI COUPES, SATYAMANGALAM RANGE.

	Yield. CFT.	*Revenue.* RS.	
1952–53	10,700	28,325	Enumeration expenditure Rs. 70.
1954–55	9,194	17,510	By contractual agency enumeration expenditure Rs. 12.
1955–56—			
Teak	1,147	26,074	By departmental extraction expenditure Rs. 2,165.
Rosewood	1,751		
Selavagai	360		
Manjakadambai	181		
Vengai	312		
	3,751		
1956–57—			
Teak	935	16,518	Expenditure Rs. 2,352.
Rosewood	1,117		
Vengai	612		
Selavagai	658		
Manjakadambai	671		
Top ends converted	39		
	4,092		

APPENDIX IX—*cont.*

PAST PRICES—FUEL—THE FOLLOWING STATEMENTS SHOW THE PRICES REALISED PER ACRE IN FUEL COUPES.

Satyamangalam Range (rate per acre.)

Year.	*Kanavoicombai felling series.*			*Satyamangalma felling series.*			*Kempanaickenpalyam felling series.*			*Kongarpalayam felling series.*		
	Coupe.	RS.	A.	*Coupe.*	RS.	A.	*Coupe.*	RS.	A.	*Coupe.*	RS.	A.
(1)	(2)	(3)		(4)	(5)		(6)	(7)		(8)	(9)	
1941–42	XXXII	26	8	X	15	1	X	17	0	X	6	9
1942–43	XXXIV	41	0	XI	21	8	XI	25	0	XI	6	9
1943–44	XXXV 1 (*a*)	95	4	1 (*a*)	21	10	1 (*a*)	27	8	1 (*a*)	25	0
1944–45	1 (*b*)	55	0	1 (*b*)	17	0	1 (*b*)	27	0	1 (*b*)	75	0
1945–46	Not sold.			1 (*c*)	43	0	1 (*c*)	43	0	1 (*c*)	22	8
1946–47	1 (*c*) 1 (*d*)	39	0	1 (*d*) 1 (*e*)	8	4	1 (*d*) 1 (*e*)	10	4	1 (*d*) 1 (*e*)	12	12
1947–48	1 (*d*) part. 1 (*e*)	60	0	1 (*f*) 1 (*g*)	12	12	1 (*f*) 2 (*a*)	30	4	1 (*f*) 2 (*a*)	35	0
1948–49	1 (*f*) 2 (*a*)	79	0	2 (*a*) 2 (*b*)	10	4	2 (*b*) 2 (*c*)	75	4	2 (*b*) 2 (*c*)	50	0
1949–50	2 (*a*) part. 2 (*b*)	109	0	2 (*c*) 2 (*d*)	9	0	2 (*d*) 2 (*e*)	71	0	2 (*d*) 2 (*e*)	50	0
1950–51	2 (*c*)	87	0	2 (*e*)	7	0	3 (*a*)	31	0	2 (*f*)	37	0
1951–52	2 (*d*)	77	0	2 (*f*)	45	0	3 (*b*)	32	0	3 (*a*)	37	0
1952–53	3 (*a*)	170	0	3 (*a*)	50	0	3 (*c*)	35	0	3 (*b*)	36	0
1953–54	3 (*b*)	31	0	3 (*b*)	27	0	3 (*d*)	45	0	3 (*c*)	26	0
1954–55	3 (*c*)	43	0	Not sold.			3 (*c*)	Not sold.		Not sold.		
1955–56	3 (*d*)	30	0	3 (*c*)	28	0	3 (*c*)	16	0	3 (*d*)	26	0

Year.	*Bangalowpudur felling series.*			*Kanakompalayam felling series.*			*Reserve series.*			*Barabetta charcoal series.*		
	Coupe.	RS.	A.	*Coupe.*	RS.	A.	*Coupe.*	RS.	A.	*Coupe.*	RS.	A.
(1)	(10)	(11)		(12)	(13)		(14)	(15)		(16)	(17)	
1941–42	**IX**	4	0	**X**	14	1	..	..		..	..	
1942–43	**X**	Not sold.		**XI**	14	5	..	..		..	..	
1943–44	**X**	4	0	**1 (*a*)**	31	4	..	..		**1**	18	0
	1 (*a*)	4	4	—	..		—	..		—	—	
1944–45	**1 (*b*)**	15	1	**1 (*b*)**	20	12	1	14	0	2	50	4
1945–46	**1 (*c*)**	22	8	**1 (*c*)**	22	8	—	..		3	46	8
1946–47	**1 (*d*)** **2 (*a*)**	8	4	**1 (*d*)** **1 (*e*)**	13	8	—	..		4	25	8
1947–48	2 (*b*) 2 (*c*)	35	0	1 (*f*) 1 (*g*)	31	0	2	Not sold.		5	62	0
1948–49	2 (*d*) 2 (*e*)	22	0	1 (*h*) 1 (*i*)	20	0	3 (*a*)	25	8	6	65	0
1949–50	2 (*f*) 3 (*a*)	59	0	1 (*j*) **2 (*a*)**	27	0	3 (*b*)	92	0	..	..	
1950–51	3 (*b*)	18	0	2 (*b*)	59	0	4 (*a*)	71	0	..	..	
1951–52	3 (*c*)	37	0	2 (*c*)	73	0	4 (*b*)	62	0	..	—	
1952–53	3 (*d*)	44	0	2 (*d*)	Not sold.		..	..		..	—	
1953–54	4 (*a*)	18	0	**2 (*d*)** **2 (*e*)**	19	0	..	..		..	..	
1954–55	Not sold.			Not sold.			..	..		..	..	
1955–56	4 (*b*)	13	0	**2 (*f*)**	5	12	..	..		..	..	

APPENDIX IX—*cont.*

PAST PRICES—FUEL—THE FOLLOWING STATEMENTS SHOW THE PRICES REALISED PER ACRE IN FUEL COUPES—*cont.*

Talamalai Range (Rate per Acre).

Year.	*Pungar felling series.*			*Combai felling series.*			*Kattangulam felling series.*			*Bennari Felling series.*		
	Coupe. (18)	RS. (19)	A.	*Coupe.* (20)	RS. (21)	A.	*Coupe.* (22)	RS. (23)	A.	*Coupe.* (24)	RS. (25)	A.
1941–42	XVII	15	8	X	17	1	XXIV	10	8	XXXIX	21	9
1942–43	XVIII	14	0	XI	26	0	XXV	16	0	Not sold.		
1943–44	1 (*a*)	20	0	1 (*a*)	20	0	1 (*a*)	70	1	XL	32	12
1944–45	1 (*b*)	20	0	1 (*b*)	31	0	1 (*b*)	70	0	1 C	126	8
1946–47	Not sold.			Not sold.			Not sold.			1 (*b*)	..	
										1 (*d*) 1 (*e*) 2 (*a*) 2 (*b*) 2 (*c*)	43	0
1946–47	1 (*c*) 1 (*d*)	8	1	1 (*c*) 1 (*d*)	8	1	1 (*c*) 1 (*d*)	41	0	Not sold.		
1947–48	1 (*d*) Part. 1 (*e*)	11	0	1 (*d*) Part. 1 (*e*)	25	0	1 (*d*) 1 (*e*)	55	4	Do.		
1948–49	1 (*f*) 1 (*g*)	30	0	1 (*f*) 1 (*g*)	35	0	1 (*f*) 1 (*g*)	82	8	Do.		
1949–50	1 (*g*) Part. 1 (*h*)	70	0	1 (*g*) Part. 1 (*h*)	64	0	1 (*g*) Part. 2 (*a*)	68	0	Do.		
1950–51	1 (*i*)	52	0	1 (*i*)	68	0	2 (*b*)	71	0	1 (*b*)	109	0
1951–52	1 (*j*)	38	0	1 (*j*)	84	0	Not sold.			1 (*g*)	61	8
1952–53	1 (*k*)	75	0	Not sold.			..	..		2 (*d*)	120	0
1953–54	Not sold.				..		..	..		3 (*d*)	57	0
1954–55	1 (*b*) 2 (*a*)	36	1	..	..		..	..		3 (*b*)	49	8
1955–56	2 (*b*)	35	0	..	..		..	..		3 (*e*)	34	0

Bhavani Range (Rate per acre).

Year.	*Doddacombai felling series.*		*Attani felling series.*		*Michaelpalyam felling series.*		*Ennamangalam felling series.*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1941–42	IX	9 8	XXXIII XXXIV	24 8	XXVIII XXIX	89 0	XXXII XXXIII	103 12
1942–43	X	8 1	XXXV	22 0	XXX	65 0	XXXIV	85 0
1943–44	XI 1(*a*) & (*b*)	– 37 0	1 (*a*)	35 2	1 (*f*)	101 12	1 (*a*)	146 0
1944–45	1 (*c*)	15 1	1 (*b*)	13 4	1 (*g*)	40 8	1 (*b*)	57 8
1945–46	1 (*d*)	22 8	1 (*c*)	22 88	2 (*a*)	36 8	1 (*c*)	36 8
1946–47	1 (*e*) 2 (*a*)	20 0	1 (*d*) 1 (*e*)	20 0	2 (*b*)	60 0	2 (*a*)	60 0
1947–48	2 (*a*) part. 2 (*b*)	46 0	1 (*e*) part. 1 (*b*)	46 0	2 (*c*)	286 12	2 (*b*)	186 12
1948–49	2 (*c*) 2 (*d*) part.	20 0	1 (*g*) 1 (*h*)	21 0	2 (*d*)	85 0	2 (*c*)	55 0
1949–50	2 (*d*) part. 2 (*e*)	40 0	1 (*h*) part. 2 (*a*)	26 0	3 (*a*)	270 0	2 (*d*)	133 0
1950–51	2 (*f*)	36 0	2 (*b*)	59 0	3 (*b*) 3 (*c*)	576 0	2 (*b*)	211 0
1951–52	2 (*g*)	27 0	2 (*c*)	45 0	3 (*d*)	221 0	3 (*a*)	90 0
1952–53	2 (*h*)	55 0	2 (*d*)	79 0	3 (*e*)	185 0	3 (*b*)	35 0
1953–54	**3 (*a*)**	36 0	2 (*e*)	17 4	4 (*a*)	11 0	3 (*c*)	25 0
1954–55	**3 (*b*)**	34 0	2 (*f*)	26 4	4 (*b*)	30 2	3 (*d*)	46 0
1955–5	**3 (*c*)**	52 4	2 (*g*)	21 8	4 (*c*)	8 12	3 (*e*)	57 0

APPENDIX IX—*cont.*

PAST PRICES—FUEL—THE FOLLOWING STATEMENTS SHOW THE PRICES REALISED PER ACRE IN **FUEL COUPES**

Bhavani Range (*Rate per Acre*)—cont.

Year.	*Chinnacombai felling series.*			*Chennampatti felling series.*			*Palamalai felling series.*			*Felling series.*			*Medur felling series.*		
	Coupe.	RS.	A.	*Coupe.*	RS.	A.	*Coupe.*	RS.	A.	*Coupe.*	RS.	A.	*Coupe.*	RS.	A.
	(10)	(11)		(12)	(13)		(13)	(15)		(16)	(17)		(18)	(19)	
1941–42	XXII	81	0	XXX	21	8	X	18	0	XVII	15	8	XXIX	10	4
1942–43	XXIII	12	0	XXXI	26	4	XI	20	15	XVIII	20	9	XXVIII	8	2
1943–44	1 (*a*)	44	15	XXXII 1 (*a*)	31 60	1 15	1 (*a*)	45	0	1 (*a*)	40	0	1 (*a*)	25	0
1944–45	1 (*b*)	21	0	1 (*b*)	17	12	1 (*b*)	15	0	1 (*b*)	15	0	1 (*b*)	20	8
1945–46	1 (*c*)	36	8	1 (*c*)	36	8	1 (*c*)	36	8	1 (*c*)	36	8	Not sold.		
1946–47	1 (*d*)	60	0	1 (*d*)	60	0	1 (*d*) 1 (*c*) part.	60	0	1 (*d*) 1 (*c*) Part.	60	0	1 (*c*) 1 (*d*)	11	
1947–48	1 (*e*)	186	12	1 (*e*)	100	0	1 (*e*)	100	0	1 (*e*)	100	0	1 (*e*)	30	8
1948–49	1 (*f*)	55	0	1 (*f*)	47	0	1 (*f*)	18	8	1 (*f*)	85	0	2 (*a*)	12	8
1949–50	1 (*g*)	63	0	1 (*g*)	63	0	1 (*g*)	22	0	2 (*a*)	87	0	2 (*b*)	12	0
1950–51	2 (*a*)	130	0	2 (*a*)	51	0	2 (*b*)	35	0	2 (*b*)	121	0	2 (*c*)	17	0
1951–52	2 (*b*)	283	0	2 (*b*)	56	0	2 (*b*)	10	0	2 (*c*)	90	0	2 (*d*)	Not sold.	
1952–53	2 (*c*)	176	0	2 (*c*)	55	0	2 (*c*)	12	0	2 (*d*)	87	0	2 (*d*)	6	0
1953–54	2 (*d*)	52	0	2 (*d*)	26	0	3 (*d*)	9	0	2 (*e*)	61	9	Not sold.		
1954–55	2 (*e*)	99	0	2 (*e*)	42	8	3 (*e*)	19	0	Not sold.			Do.		
1955–56	2 (*f*)	270	0	2 (*f*)	41	12	2 (*f*)	Not sold.		2 (*b*) 2 (*g*)	88	0	3 (*a*) 2 (*f*) 2 (*e*)	137	0

APPENDIX—*cont.*

Mattupalayam Range (Rate per acre).

Year.	*Tholampalayam Fuel Felling Series.*			*Kandiyur Fuel Felling Series.*			*Sundapetty Fuel Felling Series.*			*Jaccanare Fuel Felling series.*		
	Coupe. (2)	RS. (3)	A.	*Coupe.* (4)	RS. (5)	A.	*Coupe.* (6)	RS. (7)	A.	*Coupe.* (8)	RS. (9)	A.
(1)												
1941–42	XXVI XXV	26	4	XXVIII XXVI	Not sold. 7	 8	XXXIII	7	8	XXI	7	5
1942–43	Not sold.			XXVIII	5	1	XXXIV	6	4	XXII	20	4
1943–44	XXVII I (*a*)	52	15	XXIX I(*a*)	50	8	XXXV I (*c*)	68	8	XXIII I (*a*)	45	4
1944–45	1 (*b*) 1 (*c*)	61	8	I (*b*)	25	0	1 (*d*)	22	8	1 (*b*)	13	0
1945–46	1 (*d*) 1 (*e*)	54	0	1 (*c*) 1 (*d*)	50	0	1 (*d*) 2 (*a*)	60	8	1 (*e*)	30	8
1946–47	1 (*f*)	70	4	1 (*e*)	38	0	2 (*b*)	23	8	1 (*d*)	66	4
1947–48	2 (*a*)	180	0	1 (*f*)	190	4	2 (*c*)	139	12	1 (*e*)	120	4
1948–49	2 (*b*)	149	8	2 (*a*)	125	0	2 (*d*)	168	0	2 (*a*)	125	0
1949–50	2 (*c*)	86	0	2 (*b*)	101	0	2 (*d*) 2 (*e*)	67	0	2 (*a*) part. 2 (*b*)	124	0
1950–51	3 (*a*) 2 (*b*)	78	0	2 (*c*)	60	0	3 (*a*)	33	0	2 (*c*)	165	0
1951–52	3 (*b*)	45	0	2 (*d*)	96	0	3 (*b*)	86	0	2 (*d*) ..	235	0
1952–53	3 (*c*)	74	0	2 (*e*)	60	0	3 (*c*)	56	0	2 (*e*)	152	0
1953–54	3 (*d*)	41	0	Not sold.			Not sold.			Not sold.		
1954–55	Not sold.			3 (*a*)	68	8	3 (*e*) 3 (*d*)	Not sold. 29	 4	3 (*a*) 2 (*b*)	95	8
1955–56	3 (*e*)	67	10	3 (*b*) 2 (*f*)	50	4	3 (*e*)	29	4	3 (*b*)	76	0

APPENDIX IX —*cont.*

Mattupalayam Range (Rate per Acre)—cont.

Year.	*Thattupallam Fuel Felling Series.*			*Naickerpalayam Fuel Felling Series.*			*Nilgiris Slopes Fuel Felling Series.*			
	Coupe.	RS.	A.	*Coupe.*	RS.	A.	*Coupe.*	RS.	A.	P.
	(10)	(11)		(12)	(13)		(14)	(15)		
1941–42	VII	4	4	VII	20	0	XVI	15	5	6
1942–43	VIII	7	9	VIII	32	0	XVII	17	2	0
1943–44	IX I (*a*)	60	4	IX I (*a*) & (*b*)	111	15	XVIII 1 (*f*) & (*g*)	53	1	0
1944–45	1 (*b*) 2 (*a*)	30	0	1 (*c*) 1 (*d*)	120	4	2 (*a*) 2 (*b*)	14	9	0
1945–46	Not sold.			1 (*e*) 1 (*f*)	100	0	Not sold.			
1946–47	Not sold.			Not sold.			2 (*c*)	66	8	0
1947–48	1 (*c*)	150	0	....	....		2 (*d*)	172	12	0
1948–49	1 (*d*)	149	0	....	....		2 (*e*)	68	0	0
1949–50	1 (*e*)	137	0	....	....		2 (*f*)	85	0	0
1950–51	1 (*f*)	202	0	....	....		2 (*g*)	170	0	0
1951–52	1 (*g*)	141	0	....	....		2 (*h*)	186	0	0
1952–53	Not worked.			....	....		Not worked.			
1953–54	....	....		....	....		....	....		
1954–55	....	....		....	....		....	....		
1955–56	....	....		....	....		....	....		

APPENDIX IX—*cont.*

BAMBOOS STATEMENT SHOWING THE REVENUE REALISED BY SALE OF BAMBOO COUPES IN THE PAST ARE GIVEN BELOW BAMBOO WORKING IN THE PAST SATYAMANGALAM RANGE.

Year.	*Mankkampalayam felling series.*			*Valamcombai's felling series.*		
	Area of coupe in acres.	*Outturn number of bamboos.*	*Amount realised.*	*Area of coupe in acres.*	*Outturn number of bamboos.*	*Amount realised.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Rs.			Rs.
1941–42	2,291	199,310	1,900	1,411	256,825	1,200
1942–43	3,417	184,660	1,759	1,445	530,919	1,359
1943–44	1,162	41,240	2,555	2,244	216,110	1,850
1944–45	2,291	139,300	5,125	1,411	211,870	2,105
1945–46	3,417	149,660	5,800	1,445	688,930	6,675
1946–47	1,162	93,400	5,000	2,244	340,170	6,375
1947–48	2,291	194,340	5,000	1,411	233,220	6,375
1948–49	3,417	156,320	5,000	1,445	614,970	6,375
1949–50	1,162	11,640	2,750	2,244	402,040	3,300
1950–51	2,291	99,860	5,500	1,411	292,920	3,510
1951–52	3,417	85,900	4,000	1,445	396,000	3,410
1952–53	1,162	11,640	2,750	2,244	272,300	3,300
1953–54		Not sold.		1,411	433,060	3,050
1954–55	3,417	492,430	5,335	1,445	63,259	6,995
1955–56	1,162	176,100	4,500	2,244	33,944	3,326

Year.	*Kempanaickenpalayam felling series.*			*Guddayur felling series.*		
	Area of coupe in acres.	*Outturn number of bamboos.*	*Amount realised.*	*Area of coupe in acres.*	*Outturn number of bamboos.*	*Amount realised.*
	(8)	(9)	(10)	(11)	(12)	(13)
			Rs.			Rs.
1941–42	4,328	473,080	4,810	3,604	209,000	905
1942–43	2,416	462,170	3,650	1,542	1,422,400	925
1943–44	3,984	353,200	3,010	2,524	422,800	1,955
1944–45	4,328	501,600	10,005	3,604	240,000	3,705
1945–46	2,416	565,440	13,700	1,542	320,000	3,975
1946–47	3,984	675,420	15,525	2,524	459,400	15,525
1947–48	4,328	440,400	15,525	3,604	137,400	..
1948–49	2,416	428,860	15,525	1,542	187,900	..
1949–50	3,984	350,520	13,000	2,524	..	..
1950–51	4,328	405,200	9,510	3,604	106,400	2,010
1951–52	2,416	674,100	9,260	1,542	149,200	5,000
1952–53	3,984	367,700	7,375	2,524	420,060	3,500
1953–54	4,328	475,400	7,600	3,604	204,400	4,480
1954–55	2,416	94,694	10,025	1,542	259400	6,000
1955–56	3,984	747,483	11,015	2,524	1,014,925	7,525

APPENDIX IX—*cont.*

BAMBOOS STATEMENT SHOWING THE REVENUE REALISED BY SALE OF BAMBOO COUPES IN THE PAST ARE GIVEN BELOW BAMBOO WORKING IN THE PAST SATYAMANGALAM RANGE—*cont.*

Year.	*Hassanur felling series.*			*West Gundri's felling series.*		
	Area of coupe in acres. (14)	*Outturn number of bamboos.* (15)	*Amount realised.* (16)	*Area of coupe in acres.* (17)	*Outturn number of bamboos.* (18)	*Amount realised.* (19)
			Rs.			Rs.
1941–42	9,234	47,310	1,505		Not sold.	
1942–43	29,650	336,000	2,275		Not sold.	
1943–44	6,936	422,800	1,810	1,601	3,560	..
1944–45	9,234	123,873	1,000	1,331	32,680	..
1945–46	29,650	133,830	6,325	1,330	8,400	..
1946–47	6,936	57,533	6,400	1,601	26,800	..
1947–48	9,234	52,543	6,400	1,331	57,600	..
1948–49	29,650	117,415	6,400	1,330	..	..
1949–50	6,936	37,466	9,110	1,601	..	..
1950–51	9,234	128,145	9,000	1,331	12,000	2,510
1951–52	29,650	213,200	4,310		Not sold.	
1952–53	6,936	118,670	4,050	1,601	3,911	2,000
1953–54	9,234	559,742	7,505	1,331	93,180	..
1954–55	29,650	239,360	6,000	1,330	482,420	1,775
1955–56	6,936	501,621	8,360	1,601	..	..

Year.	*East Gundri's felling series.*			*Ulupalayam felling series.*		
	Area of coupe in acres. (20)	*Out urn number of bamboos.* (21)	*Amount realised.* (22)	*Area of coupe in acres.* (23)	*Outturn number of bamboos.* (24)	*Amount realised.* (25)
			Rs.			Rs.
1941–42		Not sold.		170	5780	724 Permit system.
1942–43		Not sold.			Not sold.	
1943–44	3,012	4,000	1,600	1,183	1,984	1,500
1944–45	3,100	31,320	2,020	1,707	120,000	2,000
1945–46	3,200	4,000	6,005	1,275	113,650	6,800
1946–47	3,012	62,200	6,375	1,183	30,800	19,000
1947–48	3,100	297,600	..	170	10,000	1,900
1948–49	3,200	201,500	..	1,275	4,000	1,900
1949–50	3,012	..	..	1,183	..	..
1950–51	3,100	33,200	..	170	16,000	..
1951–52		Nol sold.		1,275	52,000	2,000
1952–53	3,012	4,094	..	1,183	26,000	730
1953–54	3,100	14,480	..	170	54,000	..
1954–55		Not sold.			Not sold.	
1955–56	3,012	62,200	6,750		Not sold.	

APPENDIX IX—*cont.*

BOMBOOS STATEMENT SHOWING THE REVENUE REALISE BY SALE OF BAMBOO COUPES IN THE PAST ARE GIVEN BELOW BAMBOO WORKING IN THE PAST SATYAMANGALAM RANGE—*cont.*

Year.	*Kadalti felling series*			*Karumbody felling series.*		
	Area of coupe in acres. (26)	*Outturn number of bamboos.* (27)	*Amount realised.* (28)	*Area of coupe in acres.* (29)	*Outturn number of bomboos.* (30)	*Amoun realised.* (31)
			Rs.			Rs.
1941–42	1,200	1,560	19·8 Permit system.		Not sold.	
1942–43		Not sold.			Not sold.	
1843–44	2,369	200	..	1,053	100	..
1944–45	1,200	20,000	..	2,270	180,000	..
1945–46	2,279	65,650	..	1,724	76,460	..
1946–47	2,369	64,700	1,525	1,053	31,980	2,550
1947–48	1,200	46,620	1,525	2,270	16,400	..
1948–49	2,279	34,025	1,525	1,724	4,000	..
1949–50	2,369	..	..	1,053	..	..
1950–51	1,200	14,000	..	2,270	10,000	..
1951–52	2,279	25,280	2,500	1,724	52,000	1,830
1952–53	2,369	30,000	2,265	1,053	26,000	1,000
1953–54	1,200	16,000	2,055	2,270	18,000	—
1954–55		Not sold.			Not sold.	
1955–56	2,369	469,894	3,116		Not sold.	

Year.	*Chickally felling series.*			*Kodambally felling series.*		
(1)	*Area of coupe in acres.* (2)	*Outturn number of bamboos.* (3)	*Amount realised.* (4)	*Area of coupe in acres.* (5)	*Outturn number of bamboos.* (6)	*Am u realise* (7)
			RS.			RS.
1941–42	2,929	10,270	80–10–6 Permit system.	1,693	6511	46–3–3 Permit system.
1942–43	2,327	14,801	350		Not sold.	
1943–44	5,328	88,680	401	1,883	8,102	85
1944–45	2,929	24 530	1,501	2,148	5,452	505
1945–46	2,327	57,672	2,105	1,693	..	660
1946–47	5,328	61,163	2,995	1,883	5,600	..
1947–48	2,929	39,130	2,895	2,148	..	..
1948–49	2,327	33,850	2,995	1,693	1,750	..
1949–50	5,328	164,104	1,600	1,883	30,350	400
1950–51	2,929	52,265	2,070	2,148	12,262	1,810
1951–52	2,327	214,320	4,610	1,693	28,468	2,100
1952–53	5,328	62,640	2,500	1,883	5,240	600
1953–54	2,929	..	1,820	2,148	..	325
1954–55	2,327	105,100	3,001	1,693	34,995	510
1955–56	5,328	134,200	2,500	1,883	38,150	600

APPENDIX IX—*cont.*

BAMBOOS STATEMENT SHOWING THE REVENUE REALISED BY SALE OF BAMBOO COUPES IN THE PAST ARE GIVEN BELOW BOMBOO WORKING IN THE PAST SATYAMANGALAM RANGE—*cont.*

Year.	*Athani felling series.*			*Kindathadi felling series.*		
	Area of coupe in acres. (8)	*Outturn number of bamboos.* (9)	*Amount realised.* (10) RS.	*Area of coupe in acres.* (11)	*Outturn number of bamboos.* (12)	*Amount realised.* (13) RS.
1941–42	1,889	216,216	1,699	4,909	312,613	1,255
1942–43	3,938	193,000	2,119	3,294	240,721	1,300
1943–44	3,128	161,127	2,705	3,045	84,134	..
1944–45	1,889	95,073	4,005	4,909	58,225	2,005
1945–46	3,938	91,445	4,020	3,294	70,465	2,010
1946–47	3,128	136,318	3,125	3,045	76,656	13,275
1947–48	1,889	107,882	3,125	3,294	141,444	13,275
1948–49	3,938	91,236	3,125	3,294	89,135	13,275
1949–50	3,128	34,422	6,270	3,045	95,120	13,500
1950–51	1,889	88,321	6,060	4,909	179,435	19,100
1951–52	3,938	91,418	6,169	3,294	133,543	11,000
1952–53	3,128	102,600	5,250	3,045	126,800	12,000
1953–54	1,889	183,455	4,029	4,909	100,000	8,250
1954–55	3,938	242,100	8,705	3,294	158,656	6,305
1955–56	3,128	762,660	7,000	3,045	120,037	5,480

Year.	*Varattupallam felling series.*			*Madam felling series.*		
	Area of coupe in acres. (14)	*Outturn number of bamboos.* (15)	*Amount realised.* (16) RS.	*Area of coupe in acres.* (17)	*Outturn number of bamboos.* (18)	*Amount realised.* (19) RS.
1941–42	2,014	126240	2,602	2,323	115,495	1,600
1942–43	1,372	269,650	2,649	1,700	67,945	1,379
1943–44	1,232	218,515	..	2,902	14,322	..
1944–45	2,014	185,820	4,505	2,323	5,505	2,005
1945–46	1,372	121,410	7,005	1,700	46,718	2,115
1946–47	1,232	170,100	13,275	2,902	70,664	1,700
1947–48	2,014	171,472	..	2,323	7,891	..
1948–49	1,372	243,100	..	1,700	65,718	..
1949–50	1,232	31,686	..	2,902	63,743	1,300
1950–51	2,014	159,728	..	2,323	57,858	7,030
1951–52	1,372	199,530	..	1,700	32,120	2,125
1952–53	1,232	146,500	..	2,902	29,200	2,250
1953–54	2,014	113,200	..	2,323	402,434	2,000
1954–55	1,372	316,200	7,415	1,700	116,145	3,100
1955–56	1,232	334,163	9,450	2,902	117,800	3,015

APPENDIX IX—*cont.*

BAMBOOS STATEMENT SHOWING THE REVENUE REALISED BY SALE OF BAMBOO COUPES IN THE PAST ARE GIVEN BELOW BAMBOO WORKING IN THE PAST SATYAMANGALAM RANGE—*cont.*

Year.	*Palamalai East felling series.*			*Palamalai West felling series.*		
	Area of coupe in acres. (20)	*Outturn number of bamboos.* (21)	*Amount realised.* (22)	*Area of coupe in acres.* (23)	*Outturn number of bamboos.* (24)	*Amount realised.* (25)
			RS.			RS.
1941–42	1,477	180,020	1,275	558	81,230	..
1942–43	2,430	161,603	1,405	549	87,584	..
1943–44	2,555	91,732	9,005	918	30,336	..
1944–45	1,477	79,779	1,525	558	25,044	..
1945–46	2,430	96,924	1,525	549	35,655	..
1946–47	2,555	68,102	..	918	34,893	1,795
1947–48	1,477	55,988	1,795	558	34,472	..
1948–49	2,430	65,189	1,795	549	27,822	..
1949–50	2,555	51,700	2,050	918	20,941	..
1950–51	1,477	36,675	4,000	558	17,288	..
1951–52	2,430	54,760	1,800	659	27,708	..
1952–53	2,555	24300	2,200	918	21,500	..
1953–54		Not sold.			Not sold.	
1954–55	2,430	28,430	2,000	549	34 760	..
1955–56		Not sold.			Not sold.	

Year.	*Palamalai South felling series.*		
	Area of coupe in acres. (26)	*Outturn number of bamboos.* (27)	*Amount realised.* (28)
			RS.
1941–42	333	82,360	..
1942–43	1,045	93,548	..
1943–44	3,677	53,843	..
1944–45	333	36,150	..
1945–46	1,045	45,473	..
1946–47	3,077	38,148	..
1947–48	333	38,070	..
1948–49	1,045	54,147	..
1949–50	3,077	25,621	..
1950–51	333	28,103	..
1951–52	1,045	22,076	..
1952–53	3,077	13,800	..
1953–54		Not sold.	
1954–55	1,045	31,540	..
1955–56		Not sold.	

APPENDIX IX—*cont.*

Bamboos statemene showing the Revenue Realised by Sale of Bamboo Coupes in the past are given below Bamboo working in the past Metupalayam Range—*cont.*

Year.	*Ulligur felling series.*			*Jakkanare felling series.*		
	Area of coupe in acres.	*Outturn number of bamboos.*	*Amount realised.*	*Area of coupe in acres.*	*Outturn number of bamboos.*	*Amount realised.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			RS.			RS.
1941–42	2,284	120,478	3,190	1,613	74,197	..
1942–43	1,461	45.102	..	2,195	38,030	..
1943–44	658	37,330	5,500	2,560	45,640	..
1944–45	2,284	110,170	..	1,613	51,720	..
1945–46	1,461	72,040	..	2,195	30,810	..
1946–47	658	21,144	14,999	2,560	10,630	..
1947–48	2,284	15,137	..	1,613	25,850	..
1948–49	1,461	13,000	..	2,195	10,610	..
1949–50	658	9,798	5,100	2,560	20,114	5,510
1950–51	2,284	18,334 and 3,377 Head loads.	..	1,613	21,098 160 Head loads.	4,010
1951–52	1,461	7,560	1,750	2,195	12,792	5,370
1952–53	658	20,526	3.935	2,560	56,210	5,405
1953–54	2,284	900	1,250	1,613	24,158	5,100
1954–55	1,461	33,023	8,530	2,195	..	..
1955–56		Not sold.		2,560	..	..

Year.	*Kallar felling series.*			*Hulikal felling series.*		
	Area of coupe in acres.	*Outturn number of bamboos.*	*Amount realised.*	*Area of coupe in acres.*	*Outturn number of bamboos.*	*Amount realised.*
	(8)	(9)	(10)	(11)	(12)	(13)
			RS.			RS.
1941–42	259	24,452	..	307	18,101	..
1942–43	538	39,925	..	531	26,134	..
1943–44	147	1,894	..	1,453	11,377	..
1944–45	259	1,1025	..	307	13,270	..
1945–46	538	19,760	..	531	13,240	..
1946–47	147	10,660	..	1,453	100 Head loads.	..
1947–48	259	5,000	..	307	1,900	..
1948–49	538	7,365	..	531	24,075	..
1949–50	147	2,289	..	1,453	3,780	..
1950–51	259	14,470	..	307	4,865	2,010
1951–52	538	147,049	2,315	531	25,082	1,705
1952–53	147	6,828	3,800	1,453	2,120	..
1953–54	259	7,300	3,060	307	..	..
1954–55	538	..	..	531	..	..
1955–56	147	..	..	1,453	..	..

APPENDIX IX—*cont.*

BAMBOOS STATEMENT SHOWING THE REVENUE REALISED BY SALE OF BAMBOO COUPES IN THE PAST ARE GIVEN BELOW : BAMBOO WORKING IN THE PAST—*cont.*

Year.	*Attipallam felling series.*			*Sithagani felling series.*		
	Area of coupe in acres. (14)	*Outturn number of bamboos.* (15)	*Amount realised.* (16) RS.	*Area of coupe in acres.* (17)	*Outturn number of bamboos.* (18)	*Amount realised.* (19) RS.
1941–42	147	5,795	..	58	111,543	..
1942–43	92	2,180	..	133	6,879	..
1943–44	112	4,000	..	38	4,870	..
1944–45	147	8,800	..	58	8,000	..
1945–46	92	6,370	..	133	9,000	..
1946–47	112	90	..	112	439 Head loads.	..
1947–48	147	630	..	58	165	..
1948–49	92	400 Head loads.	..	133	1,340 and 600 Head loads.	..
1949–50	112	454 Head loads.	5,100	38	2,468	..
1950–51	147	8,000	3,950	58	9,520	..
1951–52	92	400	115	133	9,000	800
1952–53	112	3,800	..	38	1,782 Head loads.	..
1953–54	147	..	..	58	764	..
1954–55	92	..	..	133	..	..
1955–56	Not sold.			38	31,023	2,050

Year.	*Odudurai felling series.*			*Berliar felling series.*		
	Area of coupe in acres. (20)	*Outturn number of bomboos.* (21)	*Amount realised.* (22) RS.	*Area of coupe in acres.* (23)	*Outturn number of bamboos.* (24)	*Amount realised.* (25) RS.
1941–42	621	1,858	..	55	..	..
1942–43	64	7,948	..	105	3,460	..
1943–44	132	6,240	..	85	9,025	..
1944–45	83	4,370	..	55	..	..
1945–46	116	..	..	105	975	..
1946–47	132	..	..	85	1,000	..
1947–48	83	300 Cart loads.	..	55	3,230	..
1948–49	116	4,265	..	105	..	..
1949–50	62	5,205	2,510	85	..	..
1950–51	83	1,660	..	55	21,215	4,010
1951–52	116	26,485	825	105	17,764	2,395
1952–53	132	14,885	2,105	85	9,555	..
1953–54	83	920	..	55	4,524	..
1954–55	116	..	..	105	..	..
1955–56	132	..	..	85	..	..

APPENDIX IX—*cont.*

A STATEMENT SHOWING REVENUE REALISED IN THE PAST BY LEASE OF MINOR FOREST PRODUCE IS GIVEN BELOW.

Year.	*Gall nuts.*	*Avaram bark.*	*Konnai bark.*	*Fodder grass.*	*Stone and tree moss.*	*Date leaves and of Bhavani Range.*	*Other Mino Forest Products including seeds.*	*Tamarind.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				Satyamangalam Range.				
1941–42	1,065	600	..	Not sold.	295	..	550	875
1942–43	1,755	605	..	450	301	..	555	360
1943–44	3,115	1,000	1,001	615	703	..	1,755	801
1944–45	1,510	825	..	1,507	2,000	..	1,005	1,101
1945–46	2,300	1,405	..	725	1,451	..	1,005	1,500
1946–47	4,600	1,265	..	2,105	1,410	..	1,255	900
1947–48	4,705	2,705	..	2,145	2,095	..	1,795	950
1948–49	3,000	2,120	1,700	1,705	1,600	..	1,760	900
1949–50	3,000	1,695	..	1,200	1,560	..	1,600	650
1950–51	3,050	2,800	..	2,145	1,800	..	1,800	761
1951–52	3,000	1,405	..	Not sold.	1,800	..	3,200	500
1952–53	2,250	1,200	815	1,320	1,125	..	2,400	307
1953–54	2,775	875	..	Not sold.	1,110	..	2,150	110
1954–55	2,810	1,810	..	Do.	1,395	..	2,355	330
1955–56	2,855	1,070	1,500	805.	1,405	..	2,355	205
				Talamalai Range.				
1941–42	1,070	220	..	Not sold.	275	..	400	400
1942–43	1,200	220	..	451	275	..	400	150
1943–44	2,026	599	..	1,860	506	..	1,799	580
1944–45	1,860	605	1,230	2,505	1,005	..	3,005	220
1945–46	2,310	605	..	525	855	..	1,755	152
1946–47	2,305	605	..	1,715	825	..	2,200	165
1847–48	2,330	1,005	..	3,000	2,100	..	3,000	210
1948–49	2,060	1,105	..	2,495	1,310	..	2,325	170
1949–50	2,505	1,110	660	1,750	1,310	..	2,255	150
1950–51	2,550	1,200	..	4,500	1,400	..	2,400	600
1951–52	2,550	1,010	..	1,015	1,300	..	4,500	160
1952–53	2,025	710	425	1,105	1,030	..	3,575	301
1953–54	2,551	651	..	1,251	951	..	3,000	Nots old.
1954–55	2,615	1,650	..	Not sold.	1,100	..	3,155	375
1955–56	2,621	507	535	1,111	1,100	..	3,251	160
				Bhavani Range.				
1941–42	1,000	Not sold.	..	Not sold.	Not sold.	799	Not sold.	145
1942–43	1,250	Do.	..	Do.	50	877	125	179 8 0
1943–44	2,325	Do.	..	125	..	1,025	..	375 0 0
1944–45	2,100	5,050	..	150	50	1,250	125	350 0 0

Year.	Honey wax bees of Talamalai range.	Sambur horns all range.	Deer horns all range.	Wax all ranges.	Honey all ranges.	Nellikoy all ranges.	Total Revenue.	
							Total up to column (9).	Total columns (11) to (14).
(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
				Satyamangalam Range.				
1941–42	195	251 0 0	72 0 0	334 0 0	1,736 0 0	213 14 0	3,355	2,393 0 0
1942–43	237 12 0	335 1 6	50 0 9	214 10 0	862 6 8	..	4,026	1,462 2 11
1943–44	..	621 7 0	Included with column (11).	152 9 0	784 12 0	..	8,990	937 5 0
1944–45	..	330 3 7	32 12 8	137 7 0	1,396 6 0	..	7,948	1,896 13 3
1945–46	..	282 7 9	34 11 3	238 2 0	1,582 1 0	..	8,386	2,137 6 0
1946–47	..	370 12 0	51 3 9	313 8 0	680 1 0	..	11,535	1,415 8 0
1947–48	..	392 0 0	76 0 0	349 0 0	2,023 0 0	..	14,395	2,840 0 0
1948–49	..	594 7 0	123 2 0	150 0 0	1,725 0 0	..	12,785	2,592 9 0
1949–50	..	120 0 0	13 12 0	206 0 0	2,356 2 0	..	9,715	2,695 14 0
1950–51	..	..	..	156 0 0	1,024 0 0	..	12,356	1,180 0 0
1951–52	..	Vide column (22).	291 3 0	35 0 0	590 0 0	..	9,905	916 3 0
1952–53	..	395 14 0	..	117 0 0	794 10 0	..	9,417	1,036 14 0
1953–54	..	453 6 6	Vide column (11).	6 0 0	748 4 0	..	7,020	1,007 10 6
1954–55	..	412 9 0	Do.	10 15 0	239 0 0	..	8,700	672 8 0
1955–56	..	517 11 0	Do.	36 0 0	302 8 0	..	10,195	856 3 0
				Talamalai Range.				
1941–42	..	..	..	..	..	..	2,365	..
1942–43	..	..	..	..	..	..	2,696	..
1943–44	..	..	..	..	..	..	7,360	..
1944–45	..	..	..	..	..	..	10,430	..
1945–46	..	..	..	..	..	..	6,202	..
1946–47	..	..	..	..	..	..	7,815	..
1947–48	..	..	..	..	..	..	12,545	..
1948–49	..	..	..	..	..	..	9,465	..
1949–50	..	..	..	..	..	..	9,760	..
1950–51	..	..	..	..	..	..	12,650	..
1951–52	..	..	..	..	..	..	10,535	..
1952–53	..	..	..	..	..	..	9,171	..
1953–54	..	..	..	..	..	..	8,404	..
1954–55	..	..	..	..	..	..	8,898	..
1955–56	..	..	..	..	..	..	8,393	..
				Bhavani Range.				
1941–42	..	..	..	..	..	..	1,944 0 0	..
1942–43	..	..	..	..	..	..	2,481 8 0	..
1943–44	..	..	..	..	..	..	3,850 0 0	..
1944–45	..	..	..	..	..	..	4,075 0 0	..

APPENDIX IX—*cont.*

A STATEMENTS SHOWING REVENUE REALISED IN THE PAST BY LEASE OF MINOR FOREST PRODUCE IS GIVEN BELOW.

Year. (1)	*Gall nuts.* (2)	*Avaram bark.* (3)	*Konnai bark.* (4)	*Fodder grass.* (5)	*Stone and tree moss.* (6)	*Date leaves and of Bhavni Range.* (7)	*Other Minor Forest Products including seeds.* (8)	*Tamarind.* (9)
				Bhavani Range.				
1945–46 ..	1,900	75	825	..	55	1,120	129	360 0 0
1946–47 ..	5,755	100	..	405	395	3,120	1,710	480 0 0
1947–48 ..	7,025	610	..	300	250	3,120	1,710	456 0 0
1948–49 ..	3,000	350	..	150	220	1,955	1,510	375 0 0
1949–50 ..	5,760	350	..	295	240	3,000	935	580 0 0
1950–51 ..	2,250	705	1,005	400	456	3,700	1,200	505 0 0
1951–52 ..	7,070	700	1,505	Not sold.	Not sold.	5,000	1,300	1,005 0 0
1952–53 ..	2,045	500	..	..	..	4,300	Not sold.	205 0 0
1953–54 ..	6,139	635	779	Not sold.	215	2,100	360	210
1954–55 ..	3,105	435	..	Do.	..	2,275	515	1,000
1955–56 ..	7,300	325	..	Do.	496	2,275	705	250
				Mettupalayam Range.				
1941–42 ..	200	410	155·11	Not sold.	Not solid.	..	405	362
1942–43 ..	325	470	..	Do.	50	..	797·4	405
1943–44 ..	150	752	..	80	50	..	1,580	1,622 8 0
1944–45 ..	305	705	..	..	..	..	1,325	680 0 0
1945–46 ..	..	675	..	..	..	..	835	365 0 0
1946–47 ..	225	505	175	Not sold.	65	..	820	690 0 0
1947–48 ..	520	1,000	..	Do.	205	..	2,000	450 0 0
1948–49 ..	400	1,250	..	100	110	..	3,205	406 0 0
1949–50 ..	375	800	..	115	Not sold.	..	2,800	700 0 0
1950–51 ..	475	800	..	135	260	..	3,605	850 0 0
1951–52 ..	515	820	..	430	Not sold.	..	4,100	355 0 0
1952–53 ..	305	900	..	Not sold.	Do.	..	1,105	299 0 0
1953–54 ..	650	1,900	..	230	Do.	..	300	200 0 0
1954–55 ..	380	2,110	1,170	Not sold.	..	..	555	402 0 0
1955–56 ..	355	1,805	..	Do.	Not sold.	..	1,010	309 0 0

Year.	*Honey was bees of Talamalai range.*	*Sambur horns all range.*	*Dear horns all range.*	*Wax all ranges.*	*Honey all ranges.*	*Nellikoy all ranges.*	*Total Revenue.* *Total up to column (9).*	*Total Revenue.* *Total colum (11) to (14)*
(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
			Bhavani Range—cont.					
1945–46	..	..	..	..	..	..	3,964 0 0	..
1946–47	..	..	..	..	..	..	11,965 0 0	..
1947–48	..	..	..	..	..	..	13,471 0 0	..
1948–49	..	..	..	..	..	..	7,560 0 0	..
1949–50	..	..	..	..	..	..	11,160 0 0	..
1950–51	..	..	..	..	..	..	10,221 0 0	..
1951–52	..	..	..	..	..	..	16,580 0 0	..
1952–53	..	..	..	..	..	..	7,050 0 0	..
1953–54	..	..	..	..	..	..	10,438 0 0	..
1954–55	..	..	..	..	..	..	7,330 0 0	..
1955–56	..	..	..	..	..	..	11,350 0 0	..
			Mettupalayam Range—*cent.*					
1941–42	..	..	..	..	..	..	1,532 11 0	..
1942–43	..	..	..	..	..	..	2,047 4 0	..
1943–44	..	..	..	..	..	..	4,234 8 0	..
1944–45	..	..	..	..	..	..	3,015 0 0	..
1945–46	..	..	..	..	..	..	1,875 0 0	..
1946–47	..	..	..	..	..	..	2,480 0 0	..
1947–48	..	..	..	..	..	..	4,175 0 0	..
1948–49	..	..	..	..	..	..	5,471 0 0	..
1949–50	..	..	..	..	..	..	4,790 0 0	..
1950–51	..	..	..	..	..	..	6,125 0 0	..
1951–52	..	..	..	..	..	..	7,220 0 0	..
1952–53	..	..	..	..	..	..	2,609 0 0	..
1953–54	..	..	..	..	..	..	3,280 0 0	..
1954–55	..	..	..	..	..	..	4,617 0 0	..
1955–56	..	..	..	..	..	..	3,479 0 0	..

APPENDIX X.

STATEMENT OF SANDALWOOD [illegible] NORTH COIMBATORE DIVISION PAST YIELD RESERVE SERIES.

Years.	Satyamangalam Range.					[illegible]i Range.					Bhavani Range.					Mettupalayam Range.				
	Area in acres.	Yield.				[illegible]	Yield.				Area in acres.	Yield.				Area in acres.	Yield.			
(1)	(2)	(3)				[illegible]	(5)				(6)	(7)				(8)	(9)			
		T.	C.	Q.	LBS.		[illegible]	C.	Q.	LBS.		T.	C.	Q.	LBS.		T.	C.	Q.	LBS.
1941–42	18,441	88	3	2	13½	6,936	[illegible]	6	3	1¼	3,896	69	12	1	16¼	7,439	7	14	1	22¼
1942–43	19,409	56	12	0	20	12,494	[illegible]	8	1	20½	3,893	6	5	3	11	4,429	8	3	0	24¼
1943–44	12,063	40	12	0	0½	13,461	31	18	0	0¾	8,263	8	2	0	17	2,268	0	19	1	12
1944–45	17,660	64	9	3	3	11,069	99	2	1	14½	6,460	6	9	0	11½	3,383	0	2	3	7½
1945–46	15,830	47	1	1	10¼	7,961	33	19	0	6⅙	1,890	7	1	0	11	4,080	3	0	1	23¾
1946–47	16,564	35	0	2	11¼	10,550	40	4	3	15¾	1,094	3	6	0	6–5/8	310	1	14	3	0½
1947–48	18,441	29	1	0	23¼	6,936	19	0	0	6¼	3,896	10	14	2	23½	7,439	2	9	2	9½
1948–49	19,409	24	0	3	15¾	12,494	25	2	2	12¼	3,893	3	7	3	15½	4,429	1	12	2	12
1949–50	12,063	11	18	3	18¾	13,461	14	10	1	23¾	8,263	0	11	1	24	2,268	0	13	0	6
1950–51	17,660	28	5	1	11	11,069	25	17	2	15	6,460	32	19	0	9	3,383	4	3	0	6
1951–52	15,830	34	18	1	21½	7,961	31	15	0	24½	1,890	78	19	2	11¾	4,080	4	18	3	26¼
1952–53	16,564	88	17	1	19¼	10,550	44	16	2	15¾	1,094	42	15	3	18¾	310	10	1	0	19–5/16
1953–54	8,441	91	17	3	11	6,936	13	17	2	10½	3,896	3	18	0	27½	7,439	6	12	2	16
1954–55	19,409	35	9	2	20¾	12,494	50	17	3	8¾	3,893	4	17	1	1½	4,429	13	3	3	27–1/2
1955–56	12,063	33	11	1	16¾	13,461	84	8	3	12¾	8,263	2	6	2	5	2,268	12	10	2	11–1/2

APPENDIX X—cont.

STATEMENT OF SANDALWOOD YIELD IN NORTH COIMBATORE DIVISION VILLAGE SERIES.

Years.	Satyamangalam Range Sandal Wood Yield.					Talamalai Range Sandalwood Yield.					Bhavani Range Sandal Wood Yield.					Mettupalayam Range Sandalwood Yield.				
	Area in acres.	Yield.				Area in acres.	Yield.				Area in acres.	Yield.				Area in acres.	Yield.			
(1)	(2)	(3)				(4)	(5)				(6)	(7)				(8)	(9)			
		T.	C.	Q.	L.		T.	C.	Q.	L.		T.	Q.	Q.	L.		T.	C.	Q.	L.
1941–42	11,417·48	44	0	0	25	12,766·22	15	15	2	16¾	550·80	0	0	2	23½	3,528·90	9	5	3	23
1942–43	20,834·79	27	11	1	1½	33,210·97	26	16	0	19¼	197·40	1	10	2	15	514·40	90	3	12	12
1943–44	6,898·19	35	8	1	11	4,885·56	7	3	0	15¼	674·41	0	17	3	1¼	2,077·11	0	1	1	21
1944–45	11,417·48	38	9	0	26⅙	12,766·22	14	11	3	15¾	550·80	0	0	9	3	3,528·91	0	0	3	20½
1945–46	20,834·79	27	16	1	16	33,210·97	19	15	1	12¼	197·40	0	0	1	19	514·40	0	0	1	21
1946–47	6,690·99	38	11	1	6	4,285·56	11	12	3	20–3/8	674·41	0	8	0	21½	207·28	0	0	1	14¼
1947–48	11,417·48	17	17	1	4¼	12,766·22	14	12	0	13¼	550·80	0	6	0	2½	3,528·91	0	0	0	13
1948–49	20,834·87	30	8	3	14	33,210·97	21	4	2	26¼	197·40	2	4	3	7	514·40	0	0	2	15
1949–50	6,690·99	52	7	3	15–3/8	4,285·56	58	10	2	4–3/8	881·69	1	18	1	9–6/16	2,077·11	0	1	3	24
1950–51	11,417·48	30	12	0	27¾	12,766·22	25	6	1	3	550.80	3	8	1	24	3,528·91	0	4	3	9
1951–52	20,834·79	80	2	1	21½	33,210·91	20	17	0	21	197·40	1	10	1	25	514·40	Nil.			
1952–53	6,690·99	95	7	0	12½	4,285·56	58	17	2	7¾	881·69	2	10	1	22	2,077·11	0	0	0	19
1953–54	11,417·48	62	18	3	20	12,766·22	25	11	3	3	550·80	1	18	3	19¼	3,528·91	0	4	3	7
1954–55	20,834·79	105	3	0	4	33,210·97	49	18	3	9–5/16	197·40	3	17	1	14½	514·40	0	0	2	15½
1955–56	6,690·99	28	17	0	12	4,285·56	25	17	0	17–3/16	881·69	1	15	0	0	..	Nil.			

APPENDIX X—*cont.*

The following statement given details of past yield of firewood **from** the various fuel coupes for a series of years :—

Fuel working in the past Satyamangalam range.

Year.	*Kanavoicombai felling Series.*				*Satyamangalam felling series.*			
	Area in acres.	*Outturn in cubic feet.*	*Price per acre.*	*Amount realised*	*Area in acres.*	*Outturn in cutbic fee.*	*Price per acre.*	*Amount realised*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			RS.	RS.			RS.	RS.
1941–42	103·50	32,544	26·8	2,742·12	49	17,760	15·1	723·0
1942–43	104·80	41,568	41·0	4,296·13	48	24,182	21·8	1,053·8
1943–44	147·5	33,282	95·4	6,436·14	59	10,550	21·10	1,275·1
1944–45	40·0	21,300	55·0	2,200·0	54	5,380	17·0	918·0
1945–46	Not sold.				41	1,560	43·0	1,763· 0
1946–47	59·0	24,774	39·0	2,301·0	78·10	7,843	8·4	644·50
1947–48	66·0	65,600	60·0	3,960·0	91·0	14,250	12·12	1,250·12
1948–49	95·70	35·940	79·0	7560·5	84·75	9,391	10·4.	868·11
1949–50	96·0	32,220	109·0	10,464·0	94·0	3,360	9·0	846·0
1950–51	42·0	9,900	87·0	3,654·0	47·0	6,252	8·0	329·0
1951–52	43·0	16,640	77·0	3,311·0	39·0	3,910	45·0	1,755·0
1952–53	54·0	34,800	170·0	9,180·0	35·0	4,780	50·0	1,750·0
1953–54	58·0	12,940	31·0	1,798·0	37·0	6,340	27·0	999·0
1954–55	50·0	7,560	43·0	2,150·0	Not sold.			
1955–56	87·0	12,580	30·0	1,110·0	47·0	5,140	28·0	1,316·0

Year.	*Kempanaickenpalayam felling series.*				*Kongarpalayam felling series.*			
	Area in acres.	*Outturn in cubic feet.*	*Price per acre.*	*Amount realised.*	*Area in acres.*	*Outturn on cubic feet.*	*Price per acre.*	*Amount realised*
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
			RS.	RS.			RS.	RS.
1941–42	45·0	11,327	17·0	765·0	42·5	8,088	6·0	278–14–0
1942–43	42·50	9,929	25·0	1,062·8	38·0	8,960	6·9	249·6
1943–44	41·0	9,280	27·8	1,127·8	42·0	16,824	25·0	1,050·0
1944–45	83·0	10,680	27·0	891·0	55·4	29,185	75·0	4,155·0
1945–46	40·0	11,460	43·0	1,720·0	91·0	43,480	22·8	2,047·8
1946–47	76·05	7,816	10·4	779·12	90·25	41,460	12·12	1,150·11
1947–48	89.50	13,900	30.4	2,707.6	85.25	53,022	35.0	2,983·12
1948–49	87·5	28,208	75·4	6,584·6	83·5	27,550	50·0	4,175·0
1949–50	92·0	26,450	71·0	6,532·0	79·0	14,000	50·0	3,950·0
1950–51	38·0	7,016	31·0	1,178·0	53·0	7,680	37·0	1,961·0
1951–52	46·0	12,100	32·0	1,472·0	51·0	17,050	37·0	1,887·0
1952–53	26·0	6,931	35·0	910·0	38·0	17,000	36·0	1,368·0
1953–54	46·0	6,360	45·0	2,070·0	40·0	17,300	25·0	1,040·0
1954–55	Not sold.							
1955–56	50·0	6,372	16·0	800·0	41·0	16,040	26·0	1,066·0

Year.	*Bungalowpudur felling series.* Area in acres.	Outturn in cubic feet.	Price per acre.	Amount in realised.	*Kanagampalayam felling series.* Area in acres.	Outturn in cubic feet.	Price per acre.	Amount realised.
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
			RS.	RS.			RS.	RS.
194	52·0	2,208	4·0	208·0	67·0	4,757	14·1	942·3
942-42		Not sold.			105·0	23,731	14·5	1,502·13
1943-44	120·6	15,420	8·3	497·6	54·0	21,320	31·4	1,687·8
1944-45	50·0	5,043	15·1	753·2	497·51	3,980	20·12	1,032·5
1945-46	55·5	3,860	22·8	1,243·12	48·4	8,060	22·8	976·8
1946-47	100·20	9,660	8·4	826·10	136·15	39,500	13,8	1,838·0
1947-48	128·5	32,900	85·0	4,497·8	132·50	80,067	31·0	4,107·8
1948-49	118·50	15,320	22·0	2,607·0	154·75	21,794	20·0	3,095·0
1949-50	120·00	17,883	59·0	7,080·0	103·00	19,661	27·0	2,781·0
1950-51	56·00	8,168	18·0	1,008·0	59·00	14,380	34·0	2,006·0
1951-52	71·00	11,680	37·0	2,627·0	73·00	8,240	37·0	2,701·0
1952-53	67·00	10,554	44·0	2,948·0		Not sold.		
1953-54	38·00	1,220	18·0	684·0	152·00	4,380	19·0	1,436·0
1954-55					Not sold.			
1955-56	54·00	9,790	13·0	702·0	72·00	5,400	5·12	414·00

Year.	*Felling Series.* Area in acres.	Outturn in cubic feet.	Price per acre.	Amount realised.	*Barabette Charcoal Series.* Area in acres.	Outturn in cubic feet.	Price per acre.	Amount realised.
	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
	RS.	RS.	RS.	RS.			RS.	RS.
1941-42	..	..	..	..	..	..	..	..
1942-43	..	..	..	..	..	..	..	..
1943-44	..	..	..	..	97·0	..	18·0	1746·0
1944-45	..	..	14·0	3,080·0	86·4	..	50·4	4,341-9-8
1945-46	..	..	..	..	97·0	..	46·8	4,510-8-0
1946-47	..	..	..	..	69·25	..	25·8	6,681·00
1947-48			Not sold.		73·00	..	62·0	4,526·00
1948-49	3(a)	47,920	25·8	3,218·0	66·5	..	65·0	4,322·8
1949-50	3 (b) ..	26,140	92·0	12,236·0	..	..	..	..
1950-51	4 (a)	20,540	71·0	12,070·0	..	..	..	..
1951-52	4 (b)	75,824	62·0	9,486·0	..	..	..	..
1952-53	..	..	..	..	..	..	..	..
1953-54	..	..	..	..	..	..	..	..
1954-55	..	..	..	..	..	..	..	..
1955-56	..	..	..	..	..	..	..	..

FUEL WORKING IN THE PAST TALAMALAI RANGE.

Year.	*Pangar felling series.*				*Dalcombai felling series.*			
	Area in acres.	*Outturn in in cubic feet.*	*Price per acre.*	*Amount realised.*	*Area in acres.*	*Outturn in cubic feet.*	*Price per acre.*	*Amount realised.*
(1)	(2)	(3)	(4)	(5)	(7)	(7)	(8)	(9)
			RS.	RS.				RS.
1941–42	77·50	20,952	15.08	1,201·04	84·50	19,371	17·1	1,441·13
1942–43	83·65	18,220	14·00	1,171·02	83·50	13,686	26·0	2,171·00
1943–44	42·5	11,460	20·0	850·00	84·0	11,566	20·0	1,680·00
1944–45	44·1	7,180	20·00	882·00	69·5	11,622	31·0	2,154·08
1945–46					Not sold.			
1946–47	60·15	27·950	8·01	484·15	124·00	29,560	8·1	999·01
1947–48	81·2	46,650	11·00	893·03	125·25	56,650	25·0	3,131·04
1948–49	84·0	8,520	30·00	2,520·00	124·70	13,320	35·0	4,364·08
1949–50	76·0	10,170	70·00	5,320·00	91·0	12,500	64·0	5,824·00
1950–51	35·0	4,600	52·00	1,820·00	54·0	5,400	68·0	36,72·00
1951–52	40·0	11,036	38·00	1,520·00	84·0	17,960	84·0	4,116·00
1952–53	47·0	4,125	75·00	3,525·00		Zot sold.		
1953–54					Not sold.			
1954–55	106·0	3,940	36·01	1,770·11		Do.		
1955–56	47·0	7,200	3·500	1,645·00		Do.		

Year.	*Kottamangalam felling series.*				*Bennari felling series.*			
	Area in acres.	*Outturn in cubic feet.*	*Price per acre.*	*Amount realised.*	*Area in acre.*	*Outturn in cubic feet.*	*Price per cubic feet.*	*Amount realised.*
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
			RS.	RS.			RS.	RS.
1941–42	87·00	15,820	10·08	913·08	91·75	303·76	21·09	1,978·6
1942–43	81·96	16,849	16·00	1.311·06	..	Not sold		
1943–44	92·00	53,278	70·10	6,445·12	104·00	35,360	32·12	3,406·0
1944–45	85·08	1,8320	70·00	6,006·00	137·07	48,820	126·08	8,691·0
1945–46	..	..	Not sold..	..	334·35	93,380	43·00	14,377·0
1946–47	78·10	07,843	8·04	644·05	Not sold.		Not sold.	
1947–48	98·01	14,250	12·12	1,250·12	Do.		Do.	
1948–49	129·75	40,521	82·08	10,704·06	Do.		Do.	
1949–50	146·00	22,960	68·00	9928·00	Do.		Do.	
1950–51	82·00	07,720	71·00	5,822·00	72·0	14,600	109·00	7,848·0
1951–52		Not sold.			69·00	15,820	61·08	4,243.8
1952–53		Do.			64·00	13,531	120·00	7,680·0
1953–54		Do.			66·00	42,096	57·00	37,62·0
1954–55		Do.			79·00	12,320	49·08	3,910·8
1955–56		Do.			65·00	9,800	34·00	2,210·0

FUEL WORKING IN THE PAST BHAVANI RANGE.

Year.	Doddacombai felling series.				Attani feeling series.			
	Area in acres.	Outturn in cubic feet.	Price per per acre.	Amount realised.	Area in acres.	Outturn in cubic feet.	Price per acre.	Amount realised.
(1)	(a)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1941–42	53	12,450	9·08	503·08	16·2	17,475	24·8	1,969·08
1942–43	53	6,810	8·01	427·05	83·25	21,808	22·0	1,831·08
1943–44	77	15,228	37·00	1,382·00	49·0	14,360	35·2	1,721·02
1944–45	39	6,500	15·01	587·07	35·0	10,812	13·4	463·12
1945–46	48·5	12,040	22·08	1,067·00	42·0	6,913	22·8	956·04
1946–47	48·65	13,120	20·00	973·00	51·95	13,200	20·0	1,039·00
1947–48	53·6	9,440	46·00	2,465·10	43·00	11,120	46·0	1,978·00
1948–49	37·0	18,700	20·00	740·00	49·00	7,340	21·0	1,029·00
1949–50	40·0	27,800	151·00	6,040·00	47·00	1,500	26.00	1,222·00
1950–51	36·0	23,240	56·00	2,016·00	42·0	1,0560	59·0	2,478·00
1951–52	27·0	13,200	200·00	5,400·00	40·0	10,440	45·0	1,800·00
1952–53	29·0	14,080	55·00	1,596·00	35·0	10,100	79·0	2,765·00
1953–54	38·0	21,000	36·00	1,368.00	29·0	10,200	17·4	500·04
1954–55	45·0	30,500	34·00	1530·00	36·0	5,920	26·4	945·00
1955–56	55·0	17,800	52·04	2,873·12	41·0	2,960	21·8	881·80

Year.	Michaelpalayam felling series.				Ennamangalam feeling series.			
	Area in acres.	Outturn in cubic feet.	Price per per acre. RS.	Amount realised. RS.	Area in acres.	Outturn in cubic feet.	Price per per acre. RS.	Amount realised. RS.
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1941–42	96·5	56,630	89·00	4,239·14	145·75	87,752	103·12	7,553·07
1942–43	44·10	24,403	65·00	2,866·08	73·0	61,420	85·00	6,205·00
1943–44	29·25	12,817	101·12	2,976·03	66·0	35,420	146·00	9,336·00
1944–45	21·5	16,223	40·09	870·12	67·5	93,578	57·08	3,881·04
1945–46	21·0	26,633	36·08	966·08	74·5	67,564	36·08	2,719·04
1946–47	20·25	7,560	60·00	1,215·00	56·50	20,568	60·00	3,390·00
1947–48	20·00	25,160	186·12	3,791·00	32·0	30,960	186·12	5,976·00
1948–49	17·0	2,699	85·00	1,445·00	73·10	24,520	55·00	4,020·08
1949–50	20·0	20,560	270·00	5,400·00	62·0	24,540	133·00	8,246·00
1950–51	51·0	26,200	576·00	14,562·00	58·0	20,280	211·00	12,238·00
1951–52	19·0	10,640	221·00	4,149·00	58·0	9,360	90·00	5,220·00
1952–53	24·0	15,030	185·00	4,440·00	74·0	10,320	35·00	2,590·00
1953–54	41·0	14,020	11·00	451·00	69·0	17,410	25·00	1,725·00
1954–55	18·0	3,610	30·02	542·04	76·0	10,080	46·00	3,496·00
1955–56	19·0	200	8·12	66·04	83·0	14,600	57·00	4,781·00

FUEL WORKING IN THE PAST BHAVANI RANGE.—*cont.*

Year.	*Chinnacombai felling series.*				*Chennampatty fleling series.*			
	Area in acres.	*Outturn in cubic feet.*	*Price per per acre.* RS.	*Amount realised.* RS.	*Area in acres.*	*Outturn in cubic feet.*	*Price per acre.* RS.	*Amount realised.* RS.
	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
1941–42	81·0	11,800	14·00	1,134·00	67·0	14,426	21·8	1,440·8
1942–43	76·25	12,612	12·00	915·00	77·0	23,393	26·4	2,021·4
1943–44	60·0	15,720	44·15	2,696·40	144·8	15,523	92·0	7,031·4
1944–45	73·0	24,624	21·00	1,533·00	96·0	17,607	17·12	1,704·0
1945–46	70·5	26,780	36·08	2,573·00	57·0	15,500	36·8	2,080·8
1946–47	95·0	36,800	60·00	5,700·00	96·0	14,690	60·0	5,760·0
1947–48	83·0	15,660	186·12	15,500·04	101·0	33,850	100·0	10,100·0
1948–49	70·80	16,000	50·00	3,894·00	96·0	12,810	47·0	4,512·0
1949–50	63·0	11,260	101·00	636·300	80·0	22,440	100·0	8,000·0
1950–51	98·0	31·160	130·00	12,740·00	80·0	17,120	51·0	4,080·0
1951–52	62·0	32·960	283·00	17,546·00	64·0	11,160	56·0	3,584·0
1952–53	76·00	25,580	176·00	75·00	75·0	8,840	55·0	4,125·0
1953–54	63·00	16,000	52·00	3,286·00	56·0	5,760	26·0	1,456·0
1954–55	72·0	23,800	99·00	7,227·00	61·0	4,080	42·8	2,592·8
1955–56	53·0	13,656	270·00	14,310·00	98·0	5,180·0	41·12	40,91·8

Year.	*Palamali felling series.*				*Guruvareddiyur felling series.*				*Mettur feeling series.*			
	Area in acres.	*Outturn in cubic feet*	*Price per acre.* RS.	*Amount realised.* RS.	*Area in acres.*	*Outturn in cubic fet.*	*Price per acre.* RS.	*Amount realised* RS.	*Area in acres.*	*Outturn in cubicfeet*	*Price per acre.* RS.	*Amount. realsied.* RS.
	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
1941–42	33·0	23,200	18·00	594·00	39·0	20,059	15·08	604·18	66·0	16,272	10·04	676·08
1942–43	35·0	28,120	20·15	732·13	39·0	15,066	20·09	801·150	63·50	23,154	8·02	515·15
1943–44	36·8	16,400	45·00	1,656·00	28·0	10,340	40·00	1,120·00	46·0	16,000	25·00	1,150·00
1944–45	41·1	9,340	15·00	616·80	24·1	8,987	15·00	361·01	58·1	13,900	30·08	1,191·00
1945–46	37·0	9,690	36·08	..	25·0	7,200	36·08	912·08		Not sold.		
1946–47	61·75	7,453	60·00	3,705·00	42·0	24,720	60·00	2,520·00	95·70	22,600	11·00	1,052·11
1947–48	47·2	11,880	100·00	4,720·00	45·75	12,240	100·00	4,575·00	44·5	7,128	30·08	1,357·04
1948–49	47·60	4,640	18·08	880·01	31·80	7,523	85·00	2,703·00	40·75	5,948	12·08	509·06
1949–50	31·00	7,940	22·00	682·00	28·0	9,700	87·00	2,436·00	58·0	2,880	12·00	696·00
1950–51	43·00	1,760	35·00	1,505·00	35.0	12,480	121·00	4,235·00	51·0	6,240	17·00	867·00
1951–52	35·00	8,360	10·00	350·00	33·0	9,960	90·00	2,970·00		Not sold.		
1952–53	43·00	3,600	12·00	516·00	35·0	9,300	87·00	3,045·00	56·0	2,300	6·00	336·00
1953–54	43·00	4,320	9·00	387·00	39	8,040	61·09	2,400·15		Not sold		
1954–55	36·0	3,000	19·00	684·00		Not sold				Not sold.		
1955–56	Not sold.					11,400	88·0	5,016·0	137	..		

FUEL WORKING WITH PAST METTUPALAYAM RANGE.

Year.	Tholampalayam fuel felling series.				Kadiyur fuel felling series.			
	Area in acres.	Outturn in cubic feet.	Price per acre.	Amount realised.	Area in acres.	Outturn in cubic feet.	Price per acre.	Amount realised.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			RS.	RS.			RS.	RS.
1941–42	102·60	38,120	26·04	1,393·08	30·05	4,360	7·008	228·12
1942–43	Not sold.				90·00	16,392	5·01	445·01
1943–44	128·175	27,512	52·12	— 2,927·12	3,116·0	31,836	50·8	2,940·00
1944–45	121·6	35,065	61·08	3,739·32	233·05	30,686	25·00	837·08
1945–46	110·45	34,650	54·00	2,982·03	41·67	34,597	50·00	1,291·102
1946–47	56·0	17,022	70·04	3,869·02	24·50	23,860	38·00	931·00
1947 48	49·25	21,745	180·00	8,865·00	34·50	36,209	190·04	6,563·100
1948–49	69·00	3,220	149·08	10,315·08	30·50	8,963	125·00	3,812·08
1949–50	29·00	11,280	86·00	2,494·00	44·00	11,680	101·00	4,444·00
1950–51	1,130·0	+ 25,700 517 Char coal bags.	78·00	4143·00	26·00	5,560	60·00	1,560·00
1951–52	35·0	13,660	45·00	1,575·00	23·0	15,000	96·00	2,208·0
1952–53	44·0	3,920	74·00	3,256·00	23·0	3,620	60·00	1,380·0
1953–54	42·0	9,460	41·00	1,722·00		Not sold.		
1954–55	..	..	..	..	35·0	12,960	68·8	28 97·08
1955–56	56·0	8,510	67·10	3,787·00	98·0	21,140	50·04	4,924·8

Year.	Sunapatty fuel felling series.				Jakkanare fuel feeling series.			
	Area in acres.	Outturn in cubic geet.	Price per acre.	Amount realised.	Area in acres.	Outturn in cubic feet.	Price per acre.	Amount. realised.
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
			RS.	RS.			RS.	RS.
1941–42	48·25	22,950	7·08	361·14	29·0	12,900	7·05	212·01
1942–43	49·375	20,206	8·59	412·12	38·75	12,484	20·04	784·11
1943–44	90·25	50,548	58·08	2,722·08	58·2	14,180	45·04	1,694·02
1944–45	28·05	Not worked.	22·08	631·02	26·5	16,393	13·00	344·08
1945–46	57·35	30·412	60·08	3,563·14	59·5	37,178	30·08	1,814·12
1946–47	26·40	19,980	23·08	620·07	30·12	29,700	66·04	1,995·07
1947–48	28·25	17,500	139·12	3,947·15	29·4	13,774	12·04	3,535·06
1948–49	34·75	19,260	168·00	5,838·00	22·75	18,600	125·00	2,843·12
1949–50	69·00	9,040	67·00	4,623·00	95·0	42,680	124·00	11,780·00
1950–51	33·0	5,320	33·00	1,089·00	58·0	31200	165·00	9,570·00
1951–52	21·00	10,400	86·00	2,322·00	17·0	16,376	235·00	3,995·00
1952–53	36·00	5,420	56·00	2,016·00	34·0	7,720	152·00	5,168·00
1953–54				Not sold.			Not sold.	
1954–55	35·0	6,120	29·04	1,023·12	73·0	40,040	95·8	6,971·08
1955–56	22·0	4,560	29·04	643·08	21·0	7,620	76·20	1,596·00

Year.	THATTAPALLAM FUEL FEELING SERIES				NAICKEMPALAYAM FUEL SERIES.	
	Area in Acres.	Outturn in cubic feet.	Price per acre.	Amount realised.	Area in acre.	Outtern cubic feet.
	(18)	(19)	(20)	(21)	22)	(23)
			RS.	RS.		
1941–42	44·00	9,720	4·04	187·00		
1942–43	42·25	6,280	7·09	319–830	29·00	13,293
1943–44	85·09	7,600	60·04	2,677·00	34·00	10,104
1944–45	56·15	18,953	30·00	842·04	41·45	24,297
1945–46					43·04	10,973
1946–47		Not sold.			34·08	2,525
1947–48		Do.				
1948–49	42·25	17,632	150·00	6337·8	..	..
1949–50	46·80	12,900	149·00	6,973·03	..	..
1950–51	28·00	6,100	137·00	3,836·00	..	..
1951–52	44·00	14,280	202·00	8,888·00	..	
1952–53	26·00	9,050	141·00	3,666·00	..	..
1953–54			Not sold.		..	..
1954–55			Do.			
1955–56			Do.			
			Do.			

Year.	THATTAPALLAM FUEL FEELING SERIES NAICKENPALAYAM FUEL FEELING SERIES—bont.		NILIGIRIS EASTERN SLOPS FUEL FEELING SERIES.			
	Price per acre.	Amount realised.	Area in acres.	Outturn in cubbic feet.	Priee per acre.	Amount realised.
	(24)	25)	(26)	(27)	(28)	(29)
1941–42	20·00	580·00	55·00	16,120	15·56	843–14–6
1942–43	32·00	1,088·00	44·00	7,820	17·02	7,538
1943–44	111·15	2,283·12	64·04	34,793	51·01	1,623–4–6
1944–45	120·04	2,758·12	99·05	15,630	14·09	1,448–15–6
1945–46	100·00	2,340·00				
1946–47	Not sold.			Not sold.		
1947–48			44·80	15,560	66·08	2,979·03
1948–49			43·00	11,060	172·12	7·428·04
1949–50			49·70	11,100	68·00	3,379·10
1950–51			64·00	15,140	85·00	5,440·00
1951–52			50·00	21,920	170·00	8,500·00
1952–53			40·00	29,876	186·00	7,440·00
1953–54					Not sold.	
1954–55						
1955–56						

APPENDIX XI.

LIST OF FLORA IN NORTH COIMBATORE DIVISION.

Botanical name. (1)	*Tamil name.* (2)	*Kanarese name.* (3)
Arbus precatorius	Kundumani	Gulugnnji.
Acacia arabica	Karuvelan	Gobbali.
Acacia concinna	Siyakayi	Sigaiballi.
Acacia farnesiana	Kadiavel	Kasturigoballi.
Acacia ferruginea	Vanni	Banhi.
Acacia intsia	Ingai	..
Acacia latrenum.	Kodavelam	Ottajali.
Acacia leucopholea	Velvelum	Nayibela, Nelijal.
Acacia pennata	Kari indu	Nayisigai.
Acacia planifroms	Kudaival	Odajali.
Acacia suma	Odula	..
Acacia sundra	Cengarungali	Kacu.
Acagypha Fruticosa	Chinni	Chigari.
Adenanthera pavonia	Anaikunrimani	Manjadi.
Adina cordifolia	Manjakadambe	Kadambur
Aegle marmelos	Vilvam	Vilvapatre.
Agave americama	Anaikkaralai	Kalnaru.
Alangium lamarckii	Azinjal	..
Ailanthus excelsa	Pimaram	Peethorai.
Ailbizzia amara	Unjal	Sujjal.
Albizzia lebbeck	Vagai	Bagai.
Albizzia marginata	..	..
Albizzia odaratissima	Salevagai	Salevagai.
Allophylus cobbe	Perrakudikai	..
Aloe officinalis	Karralai	Ruktabala.
Angoeissus latifolia	Vellanagai	Bejjal.
Amoora rohituka.	Vankal	Mullumuttaga.
Argyera pomacea	..	
Anacardium occidentale	Andimma	Gera.
Atalentia monophylla	Kattelumichai	Katimbai.
Azadirachta indica	Vepam.	Bevina mara
Balasmodendron berryi	Kiluvai	Izhalai.
Bambusa arundinacea	Perumoongal	Bidurு.
Barleria Sp.	Kothi mullu	..
Bassia latifolia	Kattu Ilippe	Alippe.
Bauhinia Vahlii	Mandaraiyilai	Anepadu.
Bauhinia racemosa	Athi	..
Berberis nepalensis	..	..
Bischofia javanica	Iraga	Neezhal.
Bombax Malabaricum	Mul elevam	Burga.
Boswellia serrata	Kungiliam	Dhupadamara.
Bridelia retusa	Mullu vengai	Kaomanjee, Gojee..
Buchanania latifolia	Sarai	Murki
Butea fron dosa	Palasu	Muthuaga.
Coesalpinia mimoseides	..	..
Callicarpa lanta	Karumpittai Chedi	Karijilu.
Calotropis gigantea	Yerikkam	Ekka.
Canthium didymum	Theranai	Pyre.
Canthium parviflorum	Karai	Karai.
Capparis sepiaria	Thoratti	Kathirimullu.
Careya arboeres	Ayma	Kaval.
Carissa Carandas	Kilakkai	Kawli gida.
Carissa Spinarum	Perumkilakkai	..
Cassia auriculata	Avaram	Avarakikee.
Cassia fistula	Konna-i	Kakke.
Gassia glauca	Thakarai	Betadavare.
Cassia Siamea	Karungaemrai	Kiretangedi
Cedrela toona	Madagiri vombu	Kilije.
Celastrus paniculata	Munjakodi	..
Cassia tora	Takkerai	Tzagaee.
Celtotis wightii	..	..
Celtis tetrandra	..	..
Chloroxylum swietenia	Perasu	Urugil.
Cinnamomum zeylancium	Lavunga	Koompva.
Cipadessa fruticosa	..	..
Citrus aurantium	..	..
Cleistanthus collnus	Odugu	..
Clerodendron infortunatum	..	Irakku.
Coceulus laurifolius	..	..
Cochlospermum gossyypium	Kongilavam	Kaduburga.
Cordia menica	Salle	..
Cordia myxa	Naru vili	Chikkacalli.

APPENDIX XI—cont.

Botanical name. (1)	*Tamil name.* (2)	*Kanarese name.* (3)
Cordia wallichii	Nariviri	
Cyeas circinalis	Pai ithu	
Dalbergia latifolia	Itti	Beedai.
Dalbergia paniculata	Panchalan	Biluga-da maram.
Dalbergia sisso		
Dendrocalamus stmictus	Kalmoongal	Binduru.
Desmodium pulchellum		
Dichrostachys cinera	Vedathalan	Odavara.
Diosphyres melanozylon	Karumthumbi	Theepra.
Diospyos montana	Vakkanai	Bukkana (Jagalagante).
Dodonoea viscosa	Virali	Hongar.
Delichandrone falecata	Kadalathi	Chekalathi.
Elaccagnus latifolia		BIkil.
Elacarpus tuberculatus		Keade (Shelaganame).
Eloedendron glaucum	Kannir maram	Mukurichi maram.
Eriolaena quinquelecularis	Malamthurthi	Kathale.
Erythrina suberosa	Murukkam	Parivalam.
Erythroxylon monogynum	Sembulichan	Kemanchi.
Eugenia jambolana	Nabal maram	Neeral.
Euphorbia tirucalli	Tirukalli	Bettugalli.
Ferenis elephantum	Velam	Belada mara.
Ficus bengalaneis	Alamaram	Alada mara.
Ficus glomerata	Athi	Athi.
Fiscus religiosa	Arasa maram	Arali.
Filicium decipiens		
Flacourtia ramontchi	Chotlakilai	
Flemingiasp		
Flueggea leucophrus†	Veppalam	Belichuli.
Fleggesa microcarpa		
Gardenia gummifera	Kambili pissin	Kalkambi
Garuga pinnata		Godde.
Givotia rotteriforms	Buthalai	Bettathavarai.
Glycosmis pentaphylla		
Gmelina arborea	Kumil	Kul maru.
Gmelina asiatica	Kumilan	Goola mara.
Grewia asiatica		
Grewia hirsuta		Uduppe.
Grewia lævigata		
Grewia tiliæfolia	Thadasal	
Gymnosporia heyneana		
Gymnosporia montana		Thandarse.
Gymnosporia ovata		
Gyrocarpus jac-quini	Thanakku	Thanakku.
Hardwickia binata	Achan	Karachu.
Helicteres isora	Valambiri	
Hemidesmus indicus	Nannari	
Heptaplerum spp.		
Heynea trijuga		
Hibi-scus lampas	Kattuparuthi	
Hiptage madablota	Kalarai	Pikigidam
Holoptelea integrifolia	Aya	Thogalala.
Indigavera pulchella	Avarai	
Ixora parviflora	Sulunduravaram	Goribi.
Jasminum angustifolium		
Jatropha cureas	Msukottai	Ucharale
Jatrophs wightiana	Kattamanakku	
Kydia calycina		Bonde.
Lagerstroemia lanceolata	Venteak	
Lagerstroemia parviflora		Chennangi
Lantana camara		
Lantana indica		
Lettsomia aggregata		
Leucas lanceæfolia	Thumbi	Thumbe.
Lagustrum walkeri		
Limonia acidiss ima		
Linociera intermedia		Seeranigaimara.
Loranthus	Karottai	Banjal.
Maba buxifolia	Ponasai	
Macaranga roxburghii		
Mosa perrottetiana		Thonde
Machilus macrantha	Kollai mavu	Karavadi...
Mallotus philippinensis	Kannila	Kesal.
Mangifera indica	Mamaram	Mavina maram.
Melia dubia	*Mala vembu*	Mala bevina maram.
Meliosmaarnottiana		

APPENDIX XI—cont.

Botanical name. (1)	*Tamil name.* (2)	*Kanarese name.* (3)
Meliosma wightii	....	....
Memecylon edule	Kayala	Ollekodi.
Miliusa Velutina	....	....
Mimosa p udica	Thotta chriungi	Thottuthara mini.
Mimusops elengi	....	....
Morinda tinctoria	Manjavathi	Kadu kumbla.
Moringa concanensis	Muringai	Nugge.
Mundulea suberosa	....	....
Murraya konigii	Karuveppalai	....
Musseandra frondosa	....	....
Ocimum sa-nctum	Tholasi	Thulasi.
Olea dio ia	....	Thurve.
Opuntia dillenii	Sapathikalli	Papas kalli.
Pandanus	Thalai	Thalai.
Parkinsonsa aculeata	Kattumasa muringai	....
Pavetta indica	Pavattai	....
Phoenix acaluis	Icham	Inchida'.
Phoenix sylvestris	....	....
Phyllanthus emblica	Nelli	Nelli.
Poinciana elata	Vadanarayanan	Kempukenciga.
Poinciana regia	Mayirkkonrai	Doddaratnagandhi.
Polyathia cerasoides	....	....
Pongamia glabra	Pungam	....
Premna tomentosa	Kolakkatai teku	....
Protium caudatum	Mala kiluvai	Bettada ishall.
Pterocarpus marsupium	Vengai	Honne.
Pterolobium indicum	Indu	(Indu) Sundai mullu.
Randia dumetorum	Madukarai	Maggarai.
Ricinus communis	Amanukku	Avudala.
Rubus lasiccarpus	....	....
Salix ichnostachya	....	....
Santalum album	Santhanam	Gandada mara.
Sapindus emarginatus	Puchi	Poocha kottai.
Sarcostemma brevistigma	Kodi kalli	....
Schleichera trijuga	Puvam	Chakte.
Schrebera swietenioides	....	Gante.
Scutia indica	....	....
Scutia myrtina	Churi	Churi.
Semecarpus anacardium	Serangottai	Gurumara.
Shorea talura	Jalari maram	Jalada mara.
Solanum indicum	....	....
Solanum pubescens	Sundai	....
Solanum verbascifolium	Mulikai	....
Solanum giganteum	....	....
Soymida febrifuga	Sema	Soma mara.
Spatholobus roxburghii	....	Mukkatta balli.
Spondias mangifera	Kattumavu	Ambatte.
Stephegyne parviflia	Nir kadambe	....
Streblus asper	....	....
Sterculia alata	....	....
Stereospermum chelonoides	Pathri	....
Staeeospermum suaveolens	....	....
Stalbilanthes	....	Guriji
Strychnos nux-vomica	Etti maram	Kasam.
Strychnos potatorum	Tettan maram	Chillada maram.
Tamarindus indica	Puliyan maram	Hunase maram.
Tectona grandis	Thekku	Thekkinmara.
Tephrosia purpurea	Kottukkoluchi	Erupali.
Terminalia arjuna	Mathi	Bili maddi.
Terminalia belerica	Thani	Thare.
Terminalia chebula	Kadukkai	Anile.
Terminalia paniculata	Pillamarudu	....
Terminalia temontosa	Karimarudu	Kari maddi.
Toddalia aculeata	....	Mullumashige.
Trema orientalis	Amathalai	....
Ventilago madraspatana	Vembadam	....
Vitex negundo	Mailadai	....
Vitis quadrangularis	Perandai	Karlai.
Webera corymbosa	....	Charanile.
Wendlandia notoniana	....	....
Wrightia tinctoria	Palai	Alanda mara.
Zizyphus jujuba	Elandai	Else.
Zizyphus olneplia	Che-lraimullu	Paragi.
Zizyphus trinervia	Karakattan	Karukattai maara.
Zizyphus xylopyrus	Retti, Kotti	Getti.

APPENDIX XI—cont.

Tamil name.	*Botanical name.*
Achan	*Hardwickia binata.*
Alamaram	*Fiscus bengalensis.*
Amathalai	*Trema Orientalis.*
Amanakku	*Ricimi communis.*
Anaikyarulai	*Agave americana.*
Anaikunriwani	*Adonanthera pavonina.*
Audiamma	*Anacardium occidentale.*
Arasa maram	*Fiscus religiosa*
Athi	*Fiscus glomerata.*
Athi	*Bauhinia racemosa.*
Avaram	*Cassia auriculata.*
Aya	*Holoptelea integrifolia.*
Ayma	*Careya a-rborea*
Azinjal	*Alangium lamarckii*
Bhuthale	*Givotia rottlriforms*
Cengarungalai	*Acacia sundra.*
Chiuni	*Acalypha fruticosa.*
Churai mullu	*Scutia indica.*
Choorai mullu	*Zizyphus oenoplia.*
Chootha kilai	*Flacourtia ramontchi.*
Elandai	*Zizyphus jujuba.*
Ettimaram	*Strychonos nuxvouica.*
Icham	*Phoenix acaulis*
Indu	*Pterolobium indicum*
Ingai	*Acacia intsia.*
Iragu	*Bischofia javanica*
Itti	*Dalbergia latifolia.*
Jalarai marem	*Shorea talura.*
Kadalathi	*Dolichandrone falcata.*
Kadiavel	*Acacia farnesiana.*
Kadukkai maram	*Terminalia chebula.*
Kalari	*Hiptage madrablota.*
Kala-moongal	*Dendrocalamus strictus.*
Kambli pissin	*Gardenia gummifera.*
Kamila	*Mallotus Philippinensis.*
Kannir maram	*Elæodendron glaucum.*
Karai	*Canthium parviflorum.*
Kari inpu	*Acacia pennata.*
Karikattan	*Zizyphus trinervia.*
Karimarudu	*Terminalia tomentosa.*
Kattukkoluc-hi	*Tephrosia purpurea.*
Karrallai	*Alee offiicinalis.*
Karukattam	*Zizyphus trineraia.*
Karumpittai chedi	*Callicarpa lanata.*
Karuvelam	*Acacia arabica.*
Keruveppalai	*Murraya Koenigii.*
Kattamaaku	*Jatropha wightiana.*
Kattu eliminchai	*Atlantia monophylla.*
Kattu ilipee	*Bassia latifolia.*
Karungonnai	*Cassia siamea.*
Kattuwasa muranjai	*Parkinsonia aculeata.*
Kattu mavu	*Spondias mangifera.*
Kayaka	*Memecylon edule.*
Kilakkai	*Carissa carandas.*
Kiluvai	*Balsamodendron berrvi.*
Kolakkattai teku	*Premma tomentosa.*
Kollai marvu	*Machilus macrantha.*
Kodavelam	*Acacia latronum.*
Kodi kalli	*Sarcostemma brevistigma.*
Konnai	*Cassia fistula.*
Kongilavam	*Cochlospernum gossypium.*
Kothi mullu	*Barlerisp.*
Kottai	*Zizyphus xylopyrus.*
Kudaivel	*Acacia planifrons.*
Kunnil	*Gmelina arborea.*
Knmi an	*Gmerlina asiatica.*
Kundumani	*Abrus precatorius.*
Kungiliyam	*Boswellia serrata.*
Lavunga	*Cinnamomum zeylancicum.*
Madagiri vembu	*Cedrela toona*
Maddi	*Terminalia arjuna.*
Malamthuruthi	*Erielaena quinq uelecularis.*
Mara ottai	*Leranthus.*
Madukarai	*Randia dumeterum.*
Malakiluvai	*Protium caudatum*
Mala vembu	*Melia dubia.*

APPENDIX XI—cont.

Tamil name.	*Botanical name.*
Mamaram	*Mangifera indica.*
Mandarai yilai	*Bauhinia vahlii.*
Manja kadambai	*Adina cordifolia.*
Manja kodi	*Celastrus Panicuaa.*
Manjanathi	*Morinda tinctoria.*
Mayirkkonrai	*Poinciana regia.*
Mullikai	*Solanuum verbas-cifolium.*
Mullu elevan	*Bombax malabaricum.*
Mullu vengai	*Bridelia retusa.*
Murukkan	*Erythrina suberosa.*
Murungai	*Moringa concanensis.*
Mus-kottai	*Jatropha curcas.*
Nannari	*Hemidesmus indicus.*
Nariviri	*Cordia monoica*
NARI vili	*Cordia myxa*
Naval maram	*Eugenia jambolana.*
Nelli	*Phyllanthus emblica.*
Nirkadambu	*Stephergyne parviflora.*
Nochi	*Vitex negunde.*
Odugu	*Cleisthandus collinus.*
Panchlan	*Dalbergia panicuaa.*
Pai-ittu	*Cyeas circinalis*
Palai	*Wrightia tinctoria.*
Palas-u	*Butea frondosa.*
Panasai	*Maba buzifoli-a*
Pathiri	*Sterospermum chelonoides.*
Pavettai	*Pavetta indica.*
Perandai	*Vitis quadrangularis.*
Perumkilakke	*Carissa spinarum.*
Perrakudikai	*Allophylus cobbe.*
Pillamarudu	*Terminalia paniculata.*
Pimaram	*Ailanthus excelsa.*
Porasu	*Chloroxylon swietenia.*
Puchi maram	*Sapindus emarginata.*
Puliyam maram	*Tamarindus indica.*
Pungam	*Pngamia glabra.*
Puvam	*Schleichera trijuga.*
Salevagai	*Albizzia odoratissima.*
Salle	*Cordia wallichii.*
Sapathi kalli	*Opuntia dillenii.*
Santhanam	*Santalum album.*
Sarai	*Buchanania latifolia.*
Sembulichan	*Erythroxylon monogynum.*
Serankottai	*Semocarpus anacardium.*
Siyakkai	*Acacia concinna.*
Sulundumaram	*Ixora parviflora.*
Sundai	*Solanum pubescens.*
Thadsal	*Grewia tiliæfolia.*
Thakkarai	*Cassia glauca.*
Thakkarai	*Cassia tora.*
Thalai	*Pandanus sp.*
Thanaku	*Gyrocarpus jacquini.*
Thani	*Terminalia belerica.*
Theku	*Tectona grandis.*
Theranai	*Canthium didymum.*
Thettan maram	*Strychnos potatorum.*
Tirucalli	*Euphorbia tirucalli.*
Tholasi	*Osimum sanctum.*
Thoratti	*Capparis sepiaria.*
Thotta surungi	*Mimosa pudica.*
Thumbai	*Leucas lanceæfolia.*
Tirugakalli	*Euphorbia antiquerum.*
Tirucalli	*Eupobia tirucalli.*
Unjal	*Albizzia amara.*
Vadanarayanan	*Poinciana elata.*
Vagai	*Albizzia lebbek.*
Vakkanai	*Diosphros montana.*
Valam biri	*Heecteres isora.*
Vanhi	*Acacia ferruginea.*
Vankul	*Aromoera rohituka.*
Vedathalan	*Dichrostachys cinerea.*
Velam	*Feronia lpephantum.*
Velvelam	*Acacia Jeucophlœa.*
Vembadam	*Ventilago madraspatana.*
Vengai	*Pterocarpus marsupium*
Vepam	*Flueggea leucopyrus*
Vellanagai	*Anogeissus latifolia.*
Venkul	*Amoora rohituka.*
Virali	*Dodnœa viscosa.*
Yerikkan	*Galotropis gigantea.*

APENDIX XI—cont.

Kanarese Name.	*Botanical name.*
Alada mara	*Ficus bengalensis.*
Alai mara	*Wrightia tincoria.*
Alippe	*Bassia latifilia.*
Ambatte	*Spondias mangifora.*
Anepadu	*Bauhinia vahlii.*
Arali	*Fiscus religiosa.*
Athi	*Fiscus glomerata.*
Avadala	*Ricinus communis.*
Ava-rikke	*Cassia auriculata.*
Bagai	*Albeizzia lebek.*
Banni	*Acacia ferruginea.*
Beedai	*Dalbergia latifolia.*
Bejjal	*Anogeissus latifolia.*
Beladamara	*Feronia elephantum.*
Bolichuli	*Flueggea leucopyrus.*
Belilal	*Acacia leucophloea.*
Bende	*Kydia calyicins.*
Beladavare	*Cassia glauca.*
Bettathavarai	*Givotia rottleriforns.*
Bettada Ishali	*Pretium caudatum.*
Bevina mara	*Azadirachta indica.*
Bidnru	*Bambusa arundinacea.*
Bilimaddi	*Terminalia arjuna.*
Bikil	*Elaeagnus latifolia.*
Bilugada maram	*Dalbergia paniculata.*
Bilvapatre	*Ae-gle marmeles.*
Bukkanai (also Jagala gante)	*Diospyros montana.*
Burga	*Bombax malabaricum.*
Chakate	*Schleichera trijuga.*
Chanamile	*Webera corymbosa.*
Chennaji	*Lagerstroemia parviflora.*
Chigari	*Acalypha fruticosa.*
Chillada m-aram	*Strychnos potatorum.*
Churi mullu	*Scutia myrtina.*
Botugalli	*Euphorbia tirucalli.*
Cikkacalli	*Cordia myxa.*
Dhupada mara	*Boswellia serrata.*
Doddaratnagandhi	*Poinciana regia.*
Ekka	*Calotropsis gigantea.*
Else	*Zizyphus jujuba.*
Empali	*Tephrosia purpurea.*
Canadadamara	*Santalum album.*
Gante	*Schrebera swietenioides.*
Gera	*Anacardium occidentale.*
Gurumara	*Semecarpus anacardium.*
Gobbali	*Acacia arabica.*
Godda	*Garuga pinnata.*
Gojje	*Bride-lia retusa.*
Goola mara	*Gmelina asiatica.*
Gorvi	*Izara parviflora.*
Gotti	*Zizyphus xylopyrus.*
Ghulabi	*Lantana camara.*
Guriji	*Strobilanthes.*
Hongar	*Dodonaea viscosa.*
Honne	*Pterocarpus marsupium.*
Hunase mara	*Tamarindus indica.*
Ichada gida	*Phoenix acaulis.*
Irakku	*Clerodendron infortunatum.*
Izhalai	*Balsamodendron berryi.*
Jalada mara	*Shorea talura.*
Kacu	*Acacia sundra.*
Kadambu	*Adina cordifolia.*
Kadukurga	*Cochlospermum gossypium.*
Kadu kumbla	*Morinda tinctoria.*
Kakke	*Cassia fistula.*
Kalkambi	*Gardenia gummifera.*
Kalmaru	*Agave americana.*
Karachu	*Gardwuejua binata.*
Karai	*Canthium parviflorum.*
Karavadi	*Machilusmarcrantha.*
Kari maddi	*Terminalia tomentosa.*
Kasturi gobbali	*Acacia farnesiana.*
Kerupukerneiga	*Poinciana regia.*
Krijilu	*Callicarpa lantana.*
Karlai	*Vitis quardrangularis.*

APPENDIX XI—cont.

Kanarese name.	*Botanical name.*
Karukattai mara	*Zizyphus trinervia.*
Kasam	*Strychnos nux-vomica.*
Kathalea	*Eriolaena quinquelocularis.*
Kathiri mullu	*Capparis sepiaria.*
Kat-imbai	*Atalantia monophylla.*
Kaval	*Careya arborea.*
Kawli gida	*Carissa carandas.*
Kemanchi	*Erythroxylon monogynum.*
Konde	*Elaeocarpus tuberculatus.*
Kailije	*Cedrela toona.*
Komanji	*Bridelia retusa.*
Koomavu	*Cinnamomum zeylancium.*
Kulimara	*Gmelina arborea.*
Lakki guda	*Vitex negundo.*
Maggarai	*Randia dumentorum.*
Mala bevina maram	*Melia dubia.*
Manjadi	*Adenanthera pavonina.*
Mavina mara	*Mangifera indica.*
Mukkatta balli	*Spathalobus roxburghii.*
Mulla nuttaga	*Ammora rolituka.*
Mullu mashige	*Toddalia aculeata.*
Mundu kalli	*Euphroba antiquerum.*
Murki	*Buchanania latifolia.*
Nuthaga	*Butea frondosa.*
Navuladi mara	*Vitex altissima.*
Nayibela	*Acacia leucophloea.*
Nayisigai	*Acacia pennata.*
Neeral	*Eugenia jambolana.*
Nelli	*Phyllanthus emblica.*
Neezhal	*Bischofia javanica.*
Nugge	*Moringa concaneasis.*
Odajali	*Acacia planifrons.*
Odavara	*Dichrostachys cinerea.*
Ollekodi	*Menecyclon edule.*
Ottajali	*Acacia latrenum.*
Papas kalli	*Opuptia dillenii.*
Paragi	*Zizyphus oenoplia.*
Parivalam	*Erythrina suberosa.*
Pikigidam	*Hiptage madableta.*
Poocha kottai	*Sapindus emarginata.*
Puktabala	*Aloe officinalis.*
Salevagai	*Albizzia odoratissima.*
Seera-nigai mara	*Linociera intermedia.*
Sigaiballi	*Acacia concinna.*
Soma mara	*Soymida febrifuga.*
Sujjal	*Albizzia amara.*
Tagace	*Cassia tora.*
Thanakku	*Gyracarpus jacquini.*
Thandarse	*Gymnosperia montana.*
Thogalala	*Holoptelea integrifolia.*
Thulasi	*Ocimum sanctum.*
Thumbe	*Keueas lanceaefolia.*
Thoopra	*Diospyros melanoxylon.*
Urugil	*Chloroxylon swietenia.*
Uduppe	*Grewia hirsuta.*

APPENDIX XII.

CONTROL RECORDS.

List of headings for the **control** *journal (to be maintained in loose leaf files by the District Forest Officer).*

I. *General—*	*Nature of entry.*
(*a*) Reserve Sandal Working Circle	Brief notes in narrative form of the position at the close of each year referring to arrears, deviations, amendments to working plan, reservation, dis-reservation,etc. (Details of such arrears, deviations, etc., should be found in the control forms and record of works but short notes amplifying entries, there will be needed).
(*b*) Village Sandal Working circle	
(*c*) Fuel Working Circle	
(*d*) Shanar Pollard Working Circle	
(*e*) Bamboo Working Circle	
(*f*) Small timber Working Circle	
(*g*) Grazing Working Circle	
(*h*) Minor Forest Produce Working Circle	
(*i*) Teak Pole Working Circle	
(*j*) Rehabilitation Working Circle	
(*k*) Irrigated Plantation Working Circle	

II. *The Reserve Sandal working circle—* ..

A. Growing stock—

(i) Remarks on the sandal growing stock, the spread or disappearance of sandal as compared with the stock maps.

(ii) Comparative remarks on height ,growth, production of heartwood in the several felling series.

(iii) Remarks on the ecology of sandal.

B. Factors Influencing the Crop—

(i) Remarks on the seasonal incidence of spike, recrudescence or new appearance of the diseases.

(ii) Observations on local or individual immunity to spike. Suggestions of possible reasons.

(iii) Influence of spike on distribution of girth classes.

(iv) Incidence of fire in sandal areas from year to year. Observations on the effect of fire on sandal.

(v) Observations on the reactions of variations in climate on the sandal growing stock.

(vi) Observations on the prevalence, of theft, and destruction or damage to sandal by men or animals.

(vii) Observations on the effect of insolation on heartwood production.

(viii) Observations on the nature and extent of the parasitism of sandal.

(ix) Incidence of grazing and its effect on the sandal growing stock.

C. Exploitation—

(i) Remarks on the suitability or adequacy of the methods of exploitation prescribed.

(ii) Abstract of the number of trees marked in each coupe and the yield realised with remarks on the proportion of sapwood trees.

(iii) Remarks on fluctuations in yield in each felling series and in the Working Circle as a whole.

(iv) The cost of exploitation including transport charges in each felling series with explanation of variations.

(v) Adequacy of the provision made for forest depots.

(vi) General remarks on the results of inspection of Forest depots.

(vii) Remarks on labour supply and Sholaga settlements.

(viii) Full account of deviations made from the Working Plan with detailed reasons.

(ix) Comments on thoroughness or otherwise of the extraction.

D. Measures of improvement—

(i) Suggestions for improving the quality of rough cleaning and for avoiding wastage through use of better implements and greater care.

(ii) Suggestions for the improvement of communications and buildings.

E. Regeneration—

(i) *Natural regeneration.*—Remarks on the extent of natural regeneration observed in various localities. Comparative comments on the natural regeneration in spiked and unspiked localities. Remarks on the probable cause of the poverty or abundance of natural regeneration.

(ii) *Seeding.*—Observations on whether sandal always seeds twice every year—comparison of seed crops in the first and second seeding.

Time of seedings in each locality.

(iii) *Artificial regeneratiomn.*—Remarks on sandal kumries.

F. Market—

(i) Statement of the price realised for each class of sandalwood.

(ii) Total quantity of sandalwood marked and gross revenue realised.

(iii) Comments on the market in general and on fluctuation in price.

G. Statistical—

(i) Observations on rate of growth of sandal based on measurements of trees of known age or ring countrings.

(ii) Notes on dryage, loss in conversion, etc.

(iii) Outturn averages.

III. *The Village Sandal Working Circle—*

(A) Policy and legal position.

(B) Effects of the revision of procedure.

(C) Payment of compensation—due dates and actual dates, causes of delay if any.

(D) Activities of private sandal merchants.

(E) The condition of sandal in unreserves and sivoijama lands.

IV. *The Fuel Working Circle—*

A. Growing stock—

(i) Notes on growing stock, the relative fuel nature of various species, thier distribution in the several felling series, etc.

B. *Factors influencing the crop—*

(i) Notes on various forms of climatic or natural damage to the crop.

(ii) Illicit fellings and other forest offences, and suggestions for preventing them.

(iii) Incidence of fire and comments on the necessity for or adequacy of the fire protection measures prescribed.

(iv) Notes on the extent to which climbers choke coppice growth and on the need, if any, for tending measures.

C. *Exploitation—*

(i) Notes on the suitability of the present division into felling series with reference to the requirements of local markets.

(ii) Notes on the adequacy of output of firewood.

(iii) Notes on the suitability of the rotation and the methods of working prescribed.

(iv) Detailed observations on (1) the re-growth of coppice shoots, (2) causes for failure of coppice, (3) influence of season of cutting and of high or low cutting on the re-growth and (4) relative coppicing power of different species.

(v) Notes on contractors and labour supply.

(vi) Statements of outturn realised from the several felling series and comparison with that from indicator areas where any have been cut.

(vii) Statements of prices realised per acre in each felling series and comments.

(viii) Comment on why any particular series could not be worked in any year.

(ix) Full account of deviations from the Working Plan, if any, with detailed justification.

D. Measures of improvement—

(i) Ramarks on the conduct of fire protective operations and their results, with suggestions as to possible modifications in lay out.

(ii) Remarks on the degree to which the closure to grazing was enforced.

(iii) Progress in the eradication of prickly perar from the coupes under working.

(iv) Suggestions for the improvement of communications and export routes.

E. *Regeneration—*

(i) *Natural regeneration.*—Observations on the extent of natural regeneration of various species.

(ii) *Seeding.*—Observations on the seeding of fuel species, time of seeding, etc.

(iii) *Artificial regeneration.*—Detailed comments on the success or failure of the rab regeneration measures prescribed, with reasons.

(iv) Suggestions for improvement or modification of technique.

(v) Notes on the relative success attained with the various species attempted to be introduced—Notes on exotics introduced.

(vi) Notes on germinative power and plant per cent of seeds of various species.

(vii) Notes on pre-treatments of seeds.

F. *Markets—*

(i) Notes on the adequacy or the provision made for catering for various local markets.

(ii) Prices of firewood in impotrant markets.

G. *Statistical—*

(i) Notes on the rate of growth of fuel species based on measurements of coppice growth of known age and on ring countings.

V. *Shanar Pollard Working Circle—*

A. *Growing stock—*

(i) General.

(ii) Coppicing capacity of important species.

B. *Exploitation—*

(i) Agency of working.

(ii) Adequacy of the output of firewood.

C. *Measures of improvement*

D. *Results of work done—*

(i) Outturn and revenue realised.

VI. *Bamboo Working Circle—*

A. *Growing stock.*

B. *Factors influencing the crop—*

(i) Illicit fellings and irregularities caused by contractors.

(ii) Violations of bamboo felling rules by contractors.

C. *Exploitation—*

(i) Notes on the suitability of the present division into felling series with reference to facility for exploitation and availability of labour.

(ii) Notes on the workability of the bamboo felling rules.

(iii) Notes on contractors and labour supply.

(iv) Statement of prices realised and comments.

(v) Cost of extraction of the different trade classes.

(vi) Any new classes of bamboos found marketable—market value and cost of extraction of such classes.

D. *Measures of improvement—*

(i) Suggestions for improvement of communications and export routes.

E. *Markets—*

(i) Prices of the different trade classes in the local markets.

(ii) Prevailing cost of transport by lorry and cart from the coupes to the markets.

VII. *Small Timber Working Circle—*

A. *Exploitation—*

(A) The working of the prescriptions.

(B) Difficulties met with.

(C) Popularity of the method.

(D) Reduction of illicit fellings.

(E) Measures of improvement suggested.

VIII. *Grazing Working Circle—*

(A) Results of application of the prescriptions.

(B) Results of the experiment in opening the coupe for the first ten years in Bennari East series.

(C) Any serious violations of the Grazing Rules.

(D) Assessment of results of artificial regeneration of fodder species.

(*a*) Current work.

(*b*) All the old fodder species regeneration areas (in particular, whether the exotic grasses are able to hold their own—or lose ground in course of time).

IX. *Minor Forest Produce Working Circle—*

(A) The agency of exploitation for the various items and its suitability—steps taken to form co-operative societies of hill tribes—obstacles and difficulties, if any, met with.

(B) Any feature of interest about the produce. Brief notes on the quantity collected—comments on any marked variation in the quantity.

(C) Remarks on the working of departmental collection and sale of honey and wax.

(D) Remarks on the collection of deer and sambhur horns and the prices fetched.

(E) The quantity of ivory collected in this division and received from other divisions—quantity sold and prices fetched—quantity disposed of otherwise.

(F) Remarks on any attempt at distillation of essential oils. Results of experiment near Geddesal on lemon grass oil distillation-*cum*-wattle planting.

(G) The condition of advance growth of *Terminalia chebula*.

(H) Planting of tamarind saplings in Chennimalai and Villikaradu Reserved Forests.

(I) Introduction of palmyrah in kumri areas.

X. *Teak Pole Working Circle—*

(A) Results of working—Description Assessment.

(B) The yield (final and intermediate). The quality of the poles—extent of use as electric transmission poles.

(C) Any changes in the planting technique—the irrigation regime.

XI. *Rehabilitation Working Circle—*

(A) Results of the diffe rent technique—Comments on their suitability and improvements on them (only on objective assessment of sustained success is required). (Notes on individual species will come under another heading below.)

(B) Any new technique apart from the standard techniques and its utility.

(C) Notes on the principal species introduced (like cashew, eucalyptus, etc.)

(D) The staff engaged from year to year on rehabilitation and protection of the former Panchayat forests and its adequacy.

(E) Any facility for irrigation and its use.

XII. *Irrigated Plantations Working Circle—*

(A) Comments on the actual planting and irrigation technique.

(B) The nature of the growing stock.

(C) The final and intermediate yield—Outturn and revenue.

XIII. *Regeneration areas under the Five-Year Plan not covered by the Working Plan (under scheme-wise headings).*

XIV. *Administrative Matters—*

A. *Forest Protection—*

(1) Brief notes on major offences detected.

(2) Conduct of staff.

(3) Offences detected by Special Mobile Patrol Party.

(4) Vulnerable areas—peculiar difficulties.

(5) Offences against the Prohibition Laws and Arms Act.

(6) Violations of the Game Laws—important cases—working of the gate system.

B. *Establishment—*

(1) Variations in the permanent and temporary strength (executive and ministerial)—Additions due to Five-Year Plan Schemes—Adequacy of staff.

(2) Quality and competence of ministerial staff.

(3) Quality and competence of executive staff.

(4) Functioning of Whitley Councils, if any.

(5) Disciplinary matters—(*a*) the general standard of discipline, (*b*) any serious complaints dealt with (*c*) a statement in tabular form of disciplinary cases during the year—particulars of the more importance cases.

(6) Education and tranining—

(*a*) Number of trained and untrained Rangers.

(*b*) Number of trained and untrained Foresters and number of Foresters deputed to the Regional Forest School.

(*c*) Number of trained and untrained Forest Guards and number sent to the Forest Guard's Training Schools.

XV. *Miscellaneous subjects—*

A. *Research—*

(1) Silvicultural Research under Reasearch Branch and the Division.

(2) Application of any new methods.

(3) Note on useful exotics.

B. Visits of scientists and experts (Foreign and Indian).

C. Contsactors (1) Standing and realiability, (2) Any cases of blacklisting and refusal of property mark registration.

D. Notes on camps.

E. *Wild Life—*

(1) Preservation of Wild Life.

(2) Population trends among wild life species (so far as known), rarity or profusion of different species (from elephants to crocodiles).

(3) Notes on shooting and fishing—any cases of prescription (interesting newaspaper cuttings may be pasted on).

F. Rural Welfare.—Plantations in Community Development areas.

G. Inspection notes—A file of inspection notes complete since inception of working plan to which cross references can be made under various headings.

H. Miscellaneous.—Points of interest not coming under any other headings.

I. Financial results in each Working Circle comparison with Working Plan forecasts only for Fuel, Bamboo, Minor Forest Produce and Grazing Working Circles (as mentioned in the abstract of the forecast for the Working Plan period in Chapter XV of Part II). (Note.—Only this is prescribed, as, of the major items, Sandal yield is, in the nature of things, liable to large fluctuations and the extent of extraction of timber is left flexible for annual decision.

APPENDIX XIII.

CLASSIFICATION OF FINALLY CLEANED SANDALWOOD.

Class and name. (1)	*Description.* (2)
1 Vilayat budh or first-class billets	Billets free from defects and weighing not less than 20 lb.
2 China budh or second-class billets	Billets free from defects and weighing from 10 to 20 lb.
3 Panjam or third-class billets	Billets free from defects and weighing from 5 to 10 lb.
4 Ghotla or short billets	Billets without defects but less than 3′ in length; weight immaterial.
5 Ghat Badla	Billets of 10 lb. and over with minor defects, such as knots, small cracks and hollows.
6 Begarad	Billets with minor defects, such as knots, small cracks and hallows, but weighing less than 10 lb.
7 Roots, first-class	Weighing not less than 15 lb.
8 Roots, second-class	Weighing not less than five lb.
9 Roots, third-class	Less than five lb. and all side roots.
10 Jaipokal, first-class	Hallow and ragged pieces weighing not less than seven lb.
11 Jaipokal, second-class	Hallow and ragged pieces weighing not less than three lb.
12 Ain Bagar	Sound and unsound pieces weighing not less than one lb.
13 Cheria	Sound and unsound pieces weighing not less than half lb.
14 Ain Chieta	Chips and small pieces of pure heartwood.
15 Hatheri Chilta	Very small chips and small pieces of heartwood (obtained in planting first four classes).
16 Mulva Chilta	Largest chips of mixed heartwood and sapwood.
17 Basala Bukini	Small chips of mixed hartwood and sapwood.
18 Saw dust	....

APPENDIX XIV.

LIST OF WORKING PLAN MAPS.

The following maps accompany the Working Plan—

1. *Management maps.*—Four in numbers are each of the following Ranges: **Sathyamangalam, Talamalai**, Bhavani and Mettupalayam.

2. Detail maps of the fuel, Shanar Pollard, rehabilitation and Teak Pole Working Circles.

APPENDIX XV.

RESERVE SANDAL WORKING CIRCLE.

Control of Fellings.

Range

Series

Prescription of the Working Plan locality to be exploited.			Record of operation carried out. Locality exploited.			Total yield (Rough cleaned wood).				Control.		Remarks.
										Deviation, if any.	Authority and Chief reason for deviation.	
Year.	Coupe number.	Area in acres.	Year.	Number of coupe.	Area in acres.	T.	CWTS.	QRS.	LBS.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

APPENDIX XVI.

RESERVE SANDAL WORKING CIRCLE.

Felling Series Journal.

Range

Series

		0—6″			6″—12″			12″—18″			18″—24″			24″—30″			30″—36″			Over 36″		
Year.	**Coupe number.**	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood.	Completete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)

APPENDIX XVII.

VILLAGE SANDAL WORKING CIRCLE.

Control Book.

Prescriptions of the Working Plan.				Record of operation carried out.												
Locality to be exploited				Locality exploited.												
				Locality.		Unreserves.			Patta fields.							
Year.	Number of coupe.	Area.	Nature of fellings.	Number of Coupe.	Area.	Number of fields.	Number of trees extracted.	Yield of RCs.	Number of fields.	Number of trees extracted	Yield of RCs. wood.	Nature of fellings.	Total yied of RCs. wood.	Deviation if any.	Authority brief reasons for deviation.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

APPENDIX XVIII.

VILLAGE SANDAL WORKING CIRCLE.

Felling Series Journal.

		Range																				
		Series																				
		0—6″			6″—12″			12″—18″			18″—24″			24″—30″			30″—36″			Over 36″		
Year.	Coupe number.	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood.	Complete trees.	Yield.	Sap wood	Complete trees.	Yield.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)

APPENDIX XIX.

FUEL WORKING CIRCLE.

Control of Fellings.

Series
Range

Prescribed.				Done.			
Year. (1)	Area in acres. (2)	Coupe number. (3)	Year of actual felling. (4)	Area surveyed in acres. (5)	Area actually worked in acres. (6)	Year of working arrears, if any. (7)	Remarks. (8)

APPENDIX XX.

FUEL WORKING CIRCLE.

Record of Yield from Fellings.

Range
Series

			Outturn			
Year. (1)	Number of coupe worked. (2)	Area worked in acres. (3)	Firewood in tons. (4)	Charcoal in tons. (5)	Timber in cft. (6)	Remarks. (7)

APPENDIX XXI.

SHANAR POLLARD WORKING CIRCLE.

Control of Fellings.

			Implementation				
Year. (1)	Number of coupe. (2)	Area in acres. (3)	Number of coupe (4)	Area in acres. (5)	Name Revenue realised (1) wy sale of coupe or (2) By sale of permits. (6)	Control deviation if any with reasons. (7)	Remarks. (8)

APPENDIX XXII.

BAMBOO WORKING CIRCLE.

Control of Fellings and Yield.

				Carried out.					Control.		
	Prescriped.			Outturn,							
				Gross yield.		Classified outturn.					
Year.	Coupe number.	Area in acres.	Coupe worked.	Bambusa.	Dendro calamus.	Classes extracted.	Number.	Revenue realised.	Deviations, if any.	Authority and brief reasons for deviation.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10	(11)	(12)

APPENDIX XXIII.

CONTROL OF FELLINGS IN THE SMALL TIMBER WORKING CIRCLE.

Felling Series.

	Prescriptions of Working Plan.		Record of operations carried out.											Control.		
							Particulars of strips.									
Year.	Number of coupe.	Number of plough shares to be marked.	Nature of fellings.	Number of coupe.	Area of coupe.	Nature of fellings.	Number of strip.	Area.	Number of trees marked in each strip.	Estimated quantity and kind of implements in each strip.	Period during which strip was open.	Number of trees felled.	Revenue realised.	Deviation, if any.	Authority and brief reasons for deviation.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

Note.—The forms for the felling series are not prepared as the prescriptions are flexible and the figures under column 3 above will depend on the actual needs of the locality.

APPENDIX XXIV.

CONTROL FORM FOR GRAZING WORKING CIRCLE.

	Prescriptions.	Results.		Control.	
Year. (1)	Areas closed to grazing. (2)	Details of areas closed. (3)	Grazing Revenue realised with full particulars. (4)	Deviations, if any with reasons. (5)	Remarks. (6)
1956-57 onwards	1. All fuel coupes for a period of 5 years including the year of felling—except in the case of Bennari East Fuel series where fuel coupes will be closed only from the 11th year after felling till the end of the rotation. 2. All young plantations (5 years or less in age)				

APPENDIX XXV.

CONTROL FORM FOR THE MINOR FOREST PRODUCE WORKING CIRCLE.

Prescriptions of the working plan.					Record of operations actually carried out.					Control	
Year. (1)	Name of produce. (2)	Method of working. (3)	Unit of lease. (4)	Period of lease. (5)	Method of working. (6)	Unit of lease. (7)	Period of lease. (8)	Yield obtained, (9)	Gross Revenue realised. (10)	Expenditure incurred. (11)	Deviations. (12)

APPENDIX XXVI.

TEAK POLE WORKING CIRCLE.

Control of fellings.

	Prescriptions of the working Plan.		Particulars of impelmentation.					
Year of planting.	Plantation to be clearfelled (in sequence).	Area in acres.	Year of felling.	Plantation felled.	Area in acres.	Classified outturn electric transmission poles of different descriptions other poles, round timber, etc.	Control deviations if any with reasons.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

APPENDIX XXVII.

TEAK POLE WORKING CIRCLE.

Control of Regeneration operations.

	Prescriptions Regeneration Area.			Particulars of Creation or Regeneration area.				
Year of planting.	Locality.	Area in acres.	Year of operation.	Locality.	Area in acres.	Number of stumps planted.	Control-deviations, if any, with reasons.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

APPENDIX XXVIII.

TEAK POLE WORKING CIRCLE.

Control of Thinnings.

	Prescriptions.		Carried out.				
Year.	Plantations to be thinned.	Area in acres.	Plantations thinned.	Area in acres.	Classified outturn.	Control deviation, if any, with resons.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

APPENDIX XXIX.

PLANTATION JOURNAL (FORM COMMON TO ALL WORKING CIRCLES).

List of headings—

1. Introduction.
2. Situation.
3. Nursery.
4. Planting Operations.

Tabular statement.

Name of R.F.	Year of formation.	Species planted.	Area in acres planted area.	Year of operation.	Result of enumeration by species.	Expenditure during the year.	Revenue during the year.	Intermediate yield cft.	Final yield cft.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

APPENDIX XXX.

REHABILITATION WORKING CIRCLE.

Control of Organisation Operations.

	Prescriptions.			Implementation.			
Year.	Serial number of technique.	Area in acres.	Serial number of technique.	Area actually regenerated.	Total area regenerated during the year.	Control-Deviations, if any, with reasons.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

APPENDIX XXXI.

CONTROL OF REGENERATION OPERATIONS IN THE IRRIGATED TEAK PLANTATION WORKING CIRCLE.

	Prescriptions Regeneration area.			Particulars of creation of Regeneration area.				
Year.	Locality.	Area in acres.	Year of operation.	Locality.	Area in acres.	Number of stumps planted.	Control Deviations, if any, with reasons.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

APPENDIX XXXII.

CONTROL OF THINNINGS IN THE IRRIGATED TEAK PLANTATION WORKING CIRCLE.

	Prescriptions.		Carried out.				
Year. (1	Plantations to be thinned. (2)	Area in acres. (3)	Plantations thinned. (4)	Area in acres. (5)	Classified outturn. (6)	Control Deviations if any, with reasons. (7)	**Remarks.** (8)

APPENDIX XXXIII.

RECORD OF WORKS MISCELLANEOUS.

Pescriptions of the working Plan.			Record of works Carried out						
Year. (1)	**Nature of work.** (2)	**Brief details of work.** (3)	**Year.** (4)	Nature of work. (5)	Brief details of work. (6)	**Cost of each item.** (7)	**Total cost of each work.** (8)	**Ddviations, if any, with full reasons.** (9)	**Remarks.** (10)

APPENDIX XXXIV.

REGISTER OF DEVIATIONS.

Year.

Working Plan for Coimbatore North Division.

			Reference to Working Plan.			
Year. (1)	**Serial number of deviation.** (2)	**Control form number and page.** (3)	**Para.** (4)	**Prescription.** (5)	**Nature of deviation.** (6)	**Remarks.** (7)

PROCEEDINGS OF THE CHIEF CONSERVATOR OF FORESTS MADRAS.

Proceedings Mis. No. 183/58, 1st July 1958

Working Plan – Coimbatore North Forest Division—Sanction.

SRI V. S. KRISHNASWAMY, M.A., I.F.S.,
Chief Conservator of Forests.

Proceedings—Ms. No. 183, dated 1st July 1958.

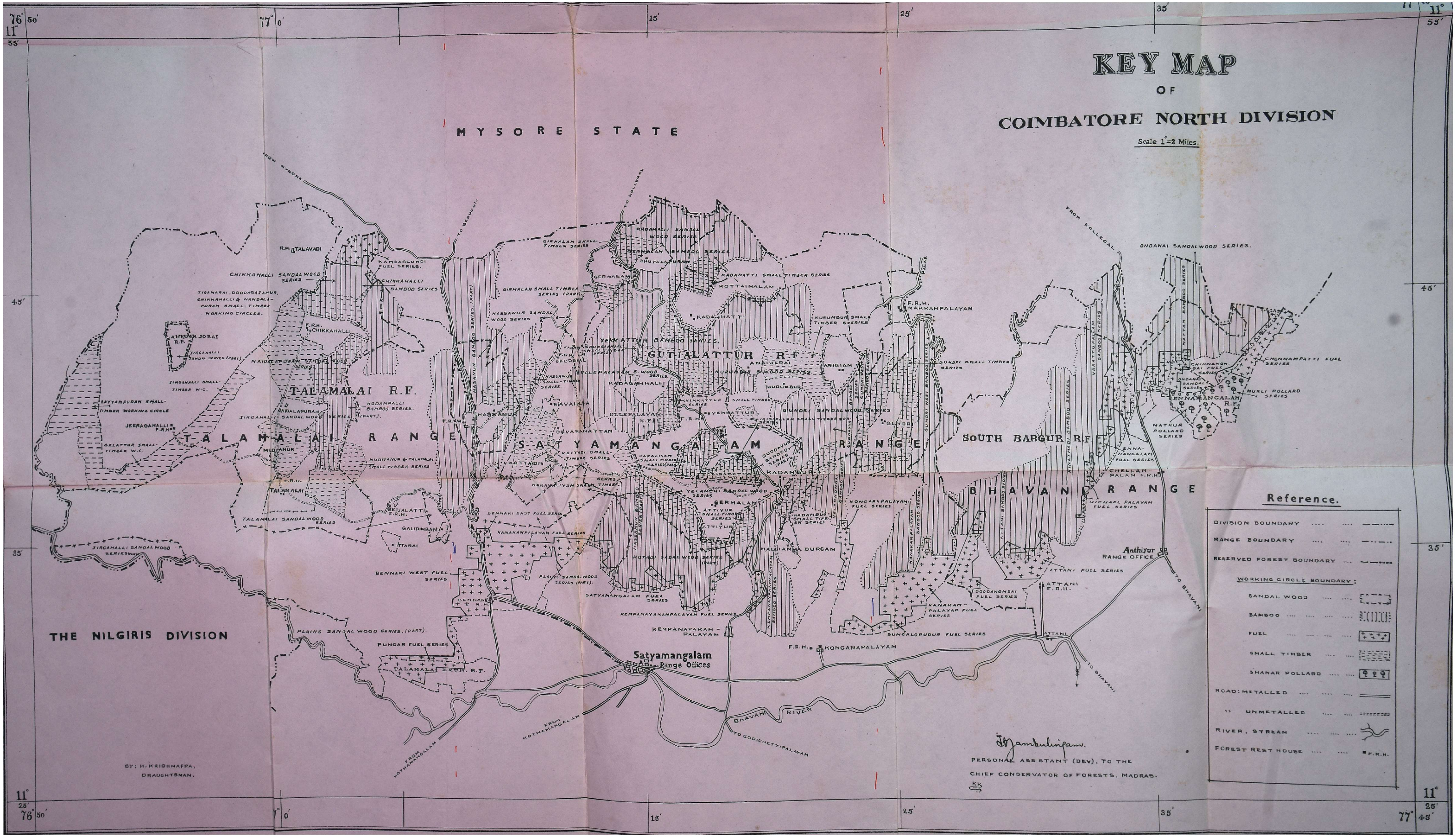
Sanctioned.

V. S. KRISHNASWAMY,
Chief Conservator of Forests.

To the Conservator of Forests, Coimbatore Circle.
„ District Forest Officer, Coimbatore North Division.

KEY MAP
OF
COIMBATORE NORTH DIVISION

Scale 1"=2 Miles.


76° 50'
11° 55'
77° 0'
15'
25'
35'
45'
35'
11° 25'
77° 45'
MYSORE STATE
THE NILGIRIS DIVISION
FROM MYSORE
TO BEDUGULI
TO KOLLEGAL
FROM KOLLEGAL
R.H. TALAVADI
KAMBARGUNDI FUEL SERIES.
CHIKKAHALLI SANDALWOOD SERIES
CHIKKAHALLI BAMBOO SERIES
TIGANARAI, DODDAGAJANUR, CHIKKAHALLI & NANDALAPURAM SMALL-TIMBER WORKING CIRCLES.
F.R.H. CHIKKAHALLI
AKKUR JORAI R.F.
JIRGAHALLI SANDAL SERIES (PART)
NAIDALAPURAM SANDALWOOD SERIES
JIRGAHALLI SMALL-TIMBER W.C.
TALAMALAI R.F.
BAYYANPURAM SMALL-TIMBER WORKING CIRCLE
KODAMPALLI BAMBOO SERIES.
NAIDALAPURAM
JIRGAHALLI SANDAL WOOD SERIES (PART).
JEERAGAHALLI F.R.H.
TALAMALAI RANGE
BELATTUR SMALL-TIMBER W.C.
MUDIYANUR
MUDIYANUR & TALAMALAI SMALL TIMBER SERIES
F.R.H. TALAMALAI
TALAMALAI SANDALWOOD SERIES
BEJJALATTI F.R.H.
GALIDIMBAM
ITTARAI
JIRGAHALLI SANDALWOOD SERIES (PART)
BENNARI WEST FUEL SERIES
BENNARI R.H.
PLAINS SANDAL WOOD SERIES. (PART).
PUNGAR FUEL SERIES
TALAMALAI EXTN. R.F.
FROM KOTHAMANGALAM
HASANUR BAMBOO SERIES. (PART).
GIRMALAM SMALL-TIMBER SERIES
KADAMALAI SANDAL WOOD SERIES
GERMALAM BAMBOO SERIES
BHUTALAPURAM
GERMALAM
GIRMALAM SMALL TIMBER SERIES (PART)
KADANATTI SMALL TIMBER SERIES
KOTTAIMALAM
HASSANUR SANDAL WOOD SERIES
KADAHATTI
KURUMBUR SMALL TIMBER SERIES
YEKKATTUR BAMBOO SERIES.
GUTIALATTUR R.F.
ANAIKERAI
ARIGIAM
F.R.H. GEDDESAL
NULLEPALAYAM S. WOOD SERIES
KURUMBUR S. WOOD SERIES
HASSANUR SMALL-TIMBER SERIES.
KADAGANHALLI
KURUMBUR
BAVAHALLA
YEKKATTUR SERIES
SMALL TIMBER
F.R.H. YEKKATTUR
F.R.H. HASSANUR
ULLEPALAYAM R.F.
GUMORI SANDALWOOD SERIES
DEVARANATTAM
SATYAMANGALAM RANGE
GUDDAYUR BAMBOO SERIES (PART)
KOTTADI SMALL-TIMBER SERIES
KARALIYAM SMALL TIMBER SERIES (PART)
KOTTADIN F.R.H.
KADAMBUR F.R.H.
KARALIYAM SMALL TIMBER SERIES
YELANCHI SANDAL WOOD SERIES
GERMALAM
ATTIYUR SMALL-TIMBER SERIES
ATTIYUR
KADAMBUR SMALL TIMBER SERIES
VELANKOMBAI BAMBOO SERIES
MALLIAMMA DURGAM
BENNARI EAST FUEL SERIES
KANAKANPALAYAM FUEL SERIES
HASSANUR BAMBOO SERIES (PART)
KOTADI SANDAL WOOD SERIES (PART)
PLAINS SANDALWOOD SERIES (PART).
SATYAMANGALAM FUEL SERIES
KEMPANAYAKANPALAYAM FUEL SERIES
KEMPANAYAKANPALAYAM BAMBOO SERIES
KEMPANAYAKAM-PALAYAM
Satyamangalam Range Offices
F.R.H. KONGARAPALAYAM
BHAVANI RIVER
FROM KOTHAMANGALAM
TO GOPICHETTIPALAYAM
PALAR
F.R.H. MAKKAMPALAYAM
GUNDRI SMALL TIMBER SERIES
GUNDRI WEST BAMBOO SERIES
GUNDRI
GUNDRI WEST BAMBOO SERIES
SOUTH BARGUR R.F.
KINATHADI BAMBOO SERIES
VARATTUPALLAM BAMBOO SERIES
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MURLI POLLARD SERIES
ENNAMANGALAM R.F.
MATHUR POLLARD SERIES
ENNAMANGALAM FUEL SERIES
CHELLAMPALAM F.R.H.
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MICHAEL PALAYAM FUEL SERIES
KONGARAPALAYAM FUEL SERIES
KANAKAMPALAYAM BAMBOO SERIES
ATTANI BAMBOO SERIES
Anthiyur RANGE OFFICE
ATTANI FUEL SERIES
ATTANI F.R.H.
DOODAKOMBAI FUEL SERIES
KANAKAMPALAYAM FUEL SERIES
BUNGALOPUDUR FUEL SERIES
ATTANI
TO BHAVANI
TO BHAVANI
Reference.
DIVISION BOUNDARY ....
RANGE BOUNDARY ....
RESERVED FOREST BOUNDARY ....
WORKING CIRCLE BOUNDARY:
SANDAL WOOD ....
BAMBOO ....
FUEL ....
SMALL TIMBER ....
SHANAR POLLARD ....
ROAD: METALLED ....
" UNMETALLED ....
RIVER, STREAM ....
FOREST REST HOUSE .... F.R.H.

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